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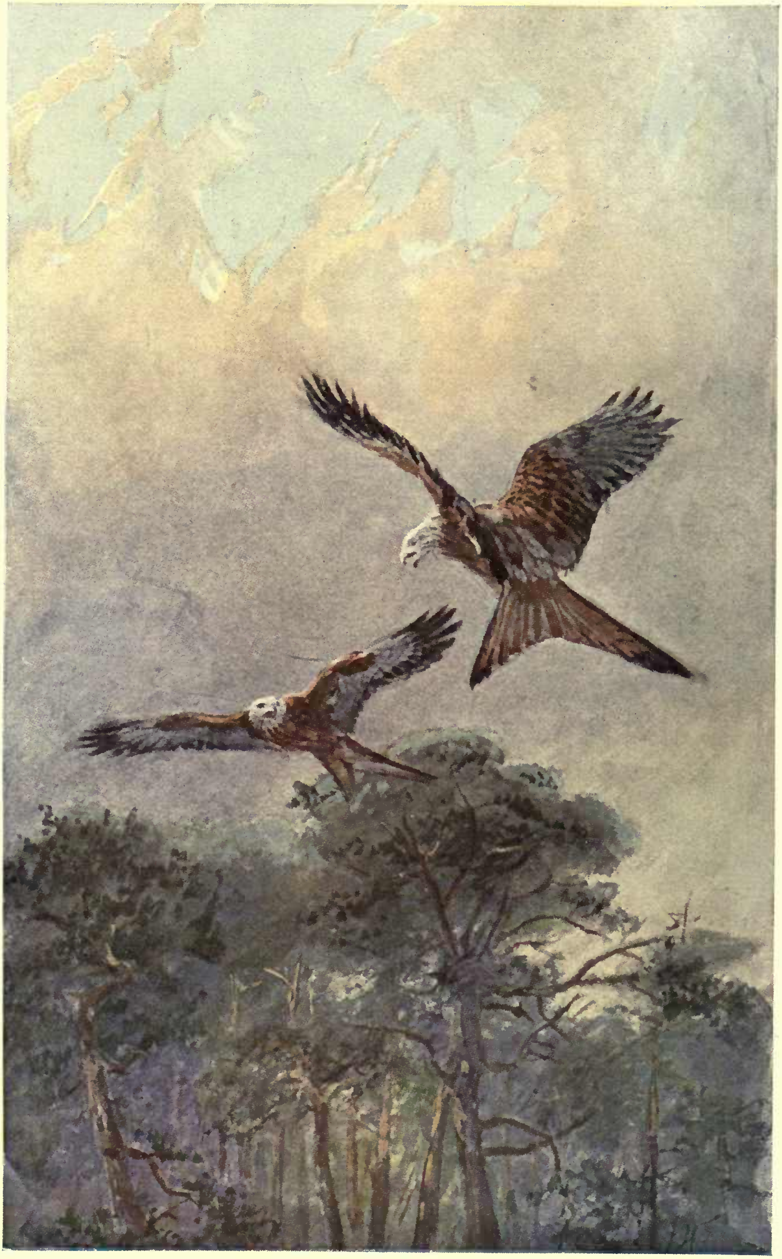

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A MANUAL OF

PALÆARCTIC BIRDS

BY

H. E. DRESSER, F.L.S., F.Z.S., &c.

AUTHOR OF "THE BIRDS OF EUROPE," ETC., ETC.

PART II

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SYSTEMATIC INDEX TO PART II

PAGE
Gyps fulvus (*Gmel.*) 499
,, himalayensis, *Hume* . . 499
Vultur monachus, *Linn.* . . . 500
Neophron percnopterus (*Linn.*). 501
Gypaetus barbatus (*Linn.*) . . 502
Circus æruginosus (*Linn.*) . . 503
,, spilonotus, *Kaup* . . . 504
,, cineraceus (*Montag.*) . . 505
,, swainsoni, *Smith* . . . 506
,, cyaneus (*Linn.*) . . . 507
,, melanoleucus (*Forster*) . 508
Buteo vulgaris, *Leach* 509
,, zimmermannæ, *Ehmcke* . 510
,, desertorum (*Daud*) . . 511
,, leucocephalus (*Hodgs.*) . 511
,, ferox (*S. G. Gmel.*) . . 512
Butastur indicus (*Gmel.*). . . 513
Archibutio lagopus (*Gmel.*) . . 514
,, hemiptilopus, *Blyth*. 515
Hieraetus pennatus (*Gould*) . . 515
,, fasciatus (*Vieill.*) . . 516
Aquila maculata (*Gmel.*) . . . 517
,, pomarina, *Brehm* . . 518
,, nipalensis, *Hodgs.* . . 519
,, rapax (*Temm.*) . . . 520
,, heliaca, *Savigny* . . . 521
,, adalberti, *L. Brehm* . . 522
,, chrysaetus (*Linn.*) . . 522
Haliaetus leucoryphus (*Pall.*) . 523
,, albicilla (*Linn.*) . . 524
,, leucocephalus (*Linn.*) 525
,, pelagicus (*Pall.*) . . 526
,, branickii, *Tacz.* . . 526
Circaetus gallicus (*Gmel.*) . . 527
Spizaetus nipalensis (*Hodgs.*) . 528
Astur palumbarius (*Linn.*) . . 529
,, badius (*Gmel.*) 530
,, brevipes (*Severtz.*) . . . 531
Accipiter nisus (*Linn.*) . . . 531
,, virgatus (*Temm.*) . . 532
Melierax polyzonus (*Rüpp.*) . . 533
Milvus ictinus, *Savigny* . . . 534
,, migrans (*Bodd.*) . . . 535

PAGE
Milvus melanotis, *Temm. and Schlegel* 536
,, ægyptius (*Gmel.*) . . . 537
Elanus cæruleus (*Desf.*) . . . 537
Pernis apivorus (*Linn.*) . . . 538
Falco gyrfalco, *Linn.* 539
,, candicans, *Gmel.* . . . 540
,, islandus, *Gmel.* 541
,, lorenzi *Menzbier* 542
,, altaicus (*Menzbier*) . . . 542
,, cherrug, *J. E. Gray* . . 543
,, milvipes, *Hodgs.* . . . 544
,, peregrinus, *Tunstall* . . 544
,, punicus, *Levaill. junr.* . 545
,, barbarus, *Linn.* 546
,, feldeggi, *Schlegel* . . . 546
,, æsalon, *Tunstall* . . . 547
,, subbuteo, *Linn.* . . . 548
,, eleonoræ, *Gené* 549
,, vespertinus, *Linn.* . . . 550
,, amurensis, *Radde* . . . 551
,, tinnunculus, *Linn.* . . . 552
,, cenchris, *Naum.* . . . 553
Pandion haliaetus (*Linn.*) . . 554
Phalacrocorax carbo (*Linn.*) . 555
,, filamentosus (*Temm. and Schlegel*) . . 556
,, bicristatus *Pall.* . 557
,, perspicillatus, *Pall.* 557
,, pelagicus, *Pall.* . . 558
,, graculus (*Linn.*) . 558
,, africanus (*Gmel.*) . 559
,, pygmæus (*Pall.*) . 560
Sula bassana (*Linn.*) 561
Pelecanus onocrotalus, *Linn.* . 562
,, roseus, *Gmel.* . . . 563
,, crispus, *Bruch.* . . 563
Ardea cinerea, *Linn.* 564
,, purpurea, *Linn.* . . . 565
,, melanocephala, *Vig. and Childr.* 566
,, alba, *Linn.* 566
,, intermedia, *Wagl.* . . 567

195344

SYSTEMATIC INDEX TO PART II

PAGE
Ardea timoriensis, *Cuv.* . . . 568
,, garzetta, *Linn.* . . . 568
,, ibis, *Linn.* 569
,, coromanda (*Bodd.*) . . 570
,, ralloides, *Scop.* 571
,, grayi, *Sykes* 572
,, bacchus, *Bp.* 572
Nycticorax griseus (*Linn.*) . . 573
Gorsachius goisagi (*Temm.*) . . 574
Ardetta javanica (*Horsf.*) . . 575
,, minuta (*Linn.*) . . . 575
,, sinensis (*Gmel.*) . . . 576
,, cinnamomea (*Gmel.*) . 577
,, eurythma, *Swinh.* . . 578
Botaurus stellaris (*Linn.*) . . 578
,, lentiginosus (*Montag.*). 579
Ciconia alba, *Bechst.* 580
,, boyciana, *Swinh.* . . 581
,, nigra (*Linn.*) 581
Platalea leucorodia, *Linn.* . . 582
,, minor, *Temm.&Schlegel.* 583
Ibis æthiopica (*Lath.*) 584
,, melanocephala (*Lath.*) . . 584
,, nippon, *Temm.* 585
,, eremita (*Linn.*) 586
Plegadis falcinellus (*Linn.*) . . 586
Phœnicopterus roseus, *Pall.* . 587
Anser ferus, *Schaeff.* 588
,, fabalis (*Lath.*) 589
,, middendorffi, *Severtz.* . 590
,, brachyrhynchus, *Baill.* . 590
,, albifrons (*Scop.*). . . . 591
,, gambeli, *Hartl.* . . . 592
,, erythropus (*Linn.*) . . 592
,, indicus (*Lath.*) 593
,, cygnoides (*Linn.*) . . . 593
Branta bernicla (*Linn.*) . . . 594
,, nigricans (*Lawr.*) . . 595
,, hutchinsi (*Richardson*) . 595
,, leucopsis (*Bechst.*) . . 596
,, ruficollis (*Pall.*) . . . 596
Chen hyperboreus (*Pall.*) . . 597
,, canagica (*Sevastanoff*) . . 598
Cygnus olor (*Gmel.*) 598
,, musicus, *Bechst.* . . . 599
,, bewicki, *Yarrell* . . . 600
Tadorna cornuta (*S. G. Gmel.*) . 601
,, casarca (*Linn.*) . . . 602
Æx galericulata (*Linn.*) . . . 603
Anas boscas, *Linn.* 604
,, zonorhyncha, *Swinh.* . . 605
Chaulelasmus streperus (*Linn.*). 605
Spatula clypeata (*Linn.*) . . . 606
Marmaronetta angustirostris (*Ménétr.*) 607
Eunetta falcata (*Georgi*) . . . 608
Querquedula circia (*Linn.*) . . 609
,, discors (*Linn.*) . 610

PAGE
Nettion crecca (*Linn.*) . . . 611
,, carolinense (*Gmel.*) . . 612
,, formosum (*Georgi*) . . 612
Dafila acuta (*Linn.*) 613
Mareca penelope (*Linn.*) . . 614
,, americana (*Gmel.*) . . 615
Æthyia rufina (*Pall.*) 616
,, ferina (*Linn.*) . . . 617
,, marila (*Linn.*) . . . 618
,, fuligula (*Linn.*) . . . 619
,, nyroca (*Güld.*) . . . 620
,, bæri (*Radde*) 621
Clangula glaucion (*Linn.*) . . 621
,, islandica (*Gmel.*) . . 622
,, albeola (*Linn.*) . . . 623
Cosmonetta histrionica (*Linn.*) . 624
Harelda glacialis (*Linn.*). . . 625
Œdemia fusca (*Linn.*). . . . 626
,, carbo (*Pall.*) 627
,, nigra (*Linn.*). . . . 627
,, americana, *Swains. and Richardson* 628
,, perspicillata (*Linn.*) . 629
Somateria stelleri (*Pall.*). . . 630
,, mollissima (*Linn.*) . 631
,, v-nigrum, *G. R. Gray* 632
,, spectabilis (*Linn.*) . 632
,, fischeri (*Brandt*) . . 633
Erismatura leucocephala (*Scop.*) 634
Mergus merganser, *Linn.* . . 635
,, serrator, *Linn.* . . . 636
,, cucullatus, *Linn.* . . 637
,, albellus, *Linn.* . . . 638
Sphenocercus sieboldi (*Temm.*). 639
Columba livia, *Bonn.* 639
,, intermedia, *Strickl.* . 640
,, rupestris, *Bp.* . . . 641
,, leuconota, *Vig.* . . 641
,, œnas, *Linn.* . . . 642
,, eversmanni, *Bp.* . . 642
,, laurivora, *Webb and Berthelot.* . . . 643
,, bollii, *Godman* . . . 644
,, trocaz, *Heineken* . . 644
,, palumbus, *Linn.* . . 645
,, casiotis (*Bp.*) . . . 646
,, ianthina (*Temm.*) . . 646
Turtur communis, *Selby* . . 646
,, isabellinus, *Bp.* . . . 647
,, ferrago (*Eversm.*) . . . 648
,, orientalis (*Lath.*) . . . 648
,, decaocta (*Frivaldsky*) . 649
,, senegalensis (*Linn.*) . . 650
,, cambayensis (*Gmel.*) . . 650
,, suratensis (*Gmel.*) . . 651
,, tranquebaricus (*Herm.*). 651
Pterocles arenarius (*Pall.*) . . 652
,, coronatus, *Licht.* . . 653

SYSTEMATIC INDEX TO PART II

PAGE
Pterocles alchata (*Linn.*) . . 654
,, senegallus (*Linn.*) . 655
,, exustus (*Temm.*) . . 656
Syrrhaptes paradoxus (*Pall.*) . 657
,, tibetanus, *Gould* . 658
Phasianus colchicus, *Linn.* . . 658
,, talischensis, *Lorenz.* . 660
,, principalis, *Sclater* . 660
,, shawi, *Elliot* . . . 660
,, persicus, *Severtz.* . . 661
,, zarafschanicus, *Tarnovski* 661
,, tarimensis, *Prjev.* . 662
,, chrysomelas, *Severtz.* 662
,, strauchi, *Prjev.* . . 663
,, berezowskyi, *Rothschild* 663
,, vlangali, *Prjev.* . . 664
,, versicolor, *Vieill.* . . 664
,, mongolicus, *Brandt* . 665
,, semitorquatus, *Severtz.* 665
,, torquatus, *Gmel.* . . 665
,, hagenbecki, *Rothschild* 666
,, satchuensis, *Prjev.* . 667
,, sœmmerringi, *Temm.* 667
,, scintillans, *Gould* . . 667
,, ijimæ, *Dresser* . . . 668
Chrysolophus pictus (*Linn.*) . 668
,, amherstiæ (*Leadb.*) 669
Pucrasia xanthospila, *Gray* . . 670
,, castanea, *Gould* . . . 670
,, meyeri, *Madarasz* . . 671
Crossoptilum tibetanum, *Hodgs.* 671
,, leucurum, *Seebohm* 671
,, mantchuricum, *Swinh.* . . . 672
,, auritum (*Pall.*) . 672
,, harmani, *Elwes* . 673
Lophophorus refulgens, *Temm.* 673
,, l'huysi, *Verr.* . . 674
Ithagenes cruentus (*Hardw.*) . 675
,, sinensis, *David* . . 675
,, geoffroyi, *Verr.* . . 676
Caccabis saxatilis (*Wolf & Meyer*) 677
,, chucar (*Gray*) . . . 678
,, magna, *Prjev.* . . . 678
,, rufa (*Linn.*) . . . 679
,, petrosa (*Gmel.*) . . . 679
Ammoperdix bonhami (*Fraser*) . 680
Francolinus vulgaris, *Steph.* . . 681
,, bicalcaratus, *Linn.* 682
Perdix cinerea, *Lath.* 682
,, daurica (*Pall.*) 683
,, hodgsoniæ, *Hodgs.* . . 684
,, sifanica, *Prjev.* . . . 684
Coturnix communis, *Bonnaterre* 685
,, japonica, *Temm. and Schlegel* 686
Tetraophasis obscurus (*Verr.*) . 686

PAGE
Tetraophasis szechenii, *Madarasz* 687
Tetraogallus caucasicus (*Pall.*) . 688
,, caspius (*S. G. Gmel.*) 689
,, himalayensis, *Gray* 690
,, tibetanus, *Gould.* . 690
,, altaicus (*Gebler*) . 691
Lagopus albus (*Gmel.*) . . . 692
,, scoticus (*Lath.*) . . . 693
,, mutus (*Moutin.*) . . 693
,, rupestris (*Gmel.*) . . 694
,, hyperboreus, *Sundewall* 695
Tetrao urogallus, *Linn.* . . . 695
,, uralensis, *Severtz. and Menzbier* 696
,, parvirostris, *Bp.* . . . 697
,, kamtschaticus, *Kittlitz* . 697
,, tetrix, *Linn.* 698
,, mlokosiewiczi, *Tacz.* . 699
,, falcipennis, *Hartl.* . . 700
Tetrastes bonasia (*Linn.*) . . 700
Tetrastes griseiventris, *Menzbier* 701
,, severtzovi, *Prjev.* . . 702
Turnix sylvatica (*Desfont.*) . . 703
,, blanfordi, *Blyth* . . . 704
Rallus aquaticus, *Linn.* . . . 704
,, indicus, *Blyth* 705
Porzana maruetta (*Leach*) . . 706
,, bailloni (*Vieill.*) . . . 707
,, pusilla (*Pall.*) . . . 708
,, parva (*Scop.*) 708
,, exquisita, *Swinh.* . . 709
,, fusca (*Linn.*) 710
,, paykulli (*Ljungh.*) . . 710
Crex pratensis, *Bechst.* . . . 711
Porphyrio cæruleus (*Vandelli*) . 712
,, madagascariensis (*Lath.*) . . . 713
,, poliocephalus (*Lath.*) 713
,, alleni, *T. R. H. Thompson* . . . 714
Gallinula chloropus (*Linn.*) . . 715
Fulica atra, *Linn.* 716
,, cristata, *Gmel.* . . . 717
Grus communis, *Bechst.* . . . 717
,, nigricollis, *Prjev.* . . . 718
,, japonensis (*P. L. S. Müller*) 719
,, monachus, *Temm.* . . . 720
,, canadensis (*Linn.*) . . . 720
,, collaris, *Bodd.* 721
,, virgo (*Linn.*) 721
,, vipio, *Pall.* 722
,, leucogeranus, *Pall.* . . . 723
Otis tarda, *Linn.* 723
,, dybowskii, *Tacz.* . . . 724
Tetrax campestris, *Leach* . . . 725
Houbara undulata (*Jacq.*) . . 726
,, macqueenii (*Gray and Hardw.*) 727

SYSTEMATIC INDEX TO PART II

PAGE
Œdicnemus scolopax (*S. G. Gmel.*) 727
Glareola pratincola (*Linn.*) 728
,, orientalis, *Leach* 729
,, melanoptera, *Nordm.* 730
Cursorius gallicus (*Gmel.*) 730
Charadrius pluvialis, *Linn.* 731
,, dominicus, *P. L. S. Müller* 732
Squatarola helvetica (*Linn.*) 733
Ægialitis mongola (*Pall.*) 734
,, geoffroyi (*Wagl.*) 735
,, pyrrhothorax, *Gould* 735
,, asiatica (*Pall.*) 736
,, vereda (*Gould*) 736
,, cantiana (*Lath.*) 737
,, hiaticula (*Linn.*) 738
,, placida (*Gray*) 739
,, semipalmata (*Bp.*) 740
,, curonica (*Gmel.*) 740
,, vocifera (*Linn.*) 741
,, pecuaria (*Temm.*) 742
Eudromias morinellus (*Linn.*) 743
Pluvianus ægyptius (*Linn.*) 744
Hoplopterus spinosus (*Linn.*) 745
Chettusia gregaria (*Pall.*) 745
,, leucura (*Licht.*) 746
Lobivanellus indicus (*Bodd.*) 747
,, cinereus (*Blyth*) 748
Vanellus vulgaris, *Bechst.* 749
Strepsilas interpres (*Linn.*) 750
Hæmatopus ostralegus *Linn.* 751
,, moquini, *Bp.* 752
Recurvirostra avocetta, *Linn.* 752
Himantopus candidus, *Bonnat* 753
Phalaropus hyperboreus (*Linn.*) 754
,, fulicarius (*Linn.*) 755
Scolopax rusticula (*Linn.*) 756
Rostratula capensis (*Linn.*) 757
Gallinago major (*Gmel.*) 758
,, cælestis (*Frenzel*) 759
,, stenura (*Kuhl.*) 761
,, megala, *Swinh.* 762
,, australis (*Lath.*) 762
,, solitaria (*Hodgs.*) 763
,, gallinula (*Linn.*) 763
Limicola platyrhyncha (*Temm.*) 764
,, sibirica, *Dresser* 765
Tringa maculata, *Vieill.* 766
,, acuminata (*Horsf.*) 767
,, bairdi (*Coues*) 767
,, fuscicollis, *Vieill.* 768
,, alpina, *Linn.* 769
,, americana (*C. L. Brehm*) 770
,, minuta, *Leisl.* 770
,, ruficollis, *Pall.* 771
,, subminuta, *Middendorff.* 772
,, minutilla, *Vieill.* 772
,, temmincki, *Leisl.* 773
Tringa subarquata (*Güld.*) 774
,, canutus, *Linn.* 775
,, crassirostris, *Temm. and Schlegel* 776
,, striata, *Linn.* 776
,, couesi (*Ridgway*) 777
,, occidentalis (*Lawr.*) 778
Calidris arenaria (*Linn.*) 779
Eurynorhynchus pygmæus (*Linn.*) 780
Machetes pugnax (*Linn.*) 780
Tringites rufescens (*Vieill.*) 782
Bartramia longicauda (*Bechst.*) 782
Totanus calidris (*Linn.*) 783
,, fuscus (*Linn.*) 784
,, glottis (*Linn.*) 786
,, guttifer, *Nordm.* 787
,, stagnatilis, *Bechst.* 787
,, flavipes (*Gmel.*) 788
,, ochropus, (*Linn.*) 789
,, solitarius (*Wilson*) 790
,, glareola (*Gmel.*) 790
,, hypoleucus (*Linn.*) 791
,, macularius (*Linn.*) 792
,, brevipes *Vieill.* 793
,, incanus (*Gmel.*) 794
Terekia cinerea (*Güld.*) 794
Macrorhamphus griseus (*Gmel.*) 795
,, semipalmatus, *Jerdon* 796
Limosa lapponica (*Linn.*) 797
,, baueri, *Naum.* 798
,, belgica (*Gmel.*) 798
Numenius borealis (*Forster*) 800
,, minutus, *Gould* 800
,, phæopus (*Linn.*) 801
,, variegatus (*Scopoli*) 802
,, tenuirostris, *Vieill.* 802
,, arquatus (*Linn.*) 803
,, cyanopus, *Vieill.* 804
Ibidorhynchus struthersi, *Vigors* 805
Hydrochelidon nigra (*Linn.*) 805
,, leucoptera (*Schinz.*) 806
,, hybrida (*Pall.*) 807
Sterna macrura, *Naum.* 808
,, fluviatilis, *Naum.* 809
,, longipennis, *Nordm.* 810
,, dougalli, *Montag.* 810
,, media, *Horsf.* 811
,, cantiaca, *Gmel.* 812
,, caspia, *Pall.* 813
,, maxima, *Bodd.* 814
,, anglica, *Montag.* 814
,, minuta, *Linn.* 815
,, sinensis, *Gmel.* 816
,, aleutica, *Baird* 817
,, fuliginosa, *Gmel.* 818
,, anæstheta, *Scop.* 818

SYSTEMATIC INDEX TO PART II

PAGE
Anous stolidus (*Linn.*) . . . 819
Xema sabinii (*J. Sabine*) . . . 820
Rhodostethia rosea (*Macgill.*) . 821
Pagophila eburnea (*Phipps*) . . 821
Rissa tridactyla (*Linn.*) . . . 822
,, brevirostris (*Bruch.*) . . 823
Larus ridibundus, *Linn.* . . . 824
,, brunneicephalus, *Jerdon* 825
,, melanocephalus, *Natterer* 825
,, philadelphia (*Ord*) . . 826
,, ichthyaetus, *Pall.* . . . 827
,, saundersi (*Swinh.*) . . 827
,, minutus, *Pall.* 828
,, canus, *Linn.* 829
,, gelastes, *Thienem* . . . 830
,, audouini, *Payraudeau* . 831
,, crassirostris, *Vieill.* . . 832
,, argentatus, *Gmel.* . . . 832
,, cachinnans, *Pall.* . . . 833
,, vegæ, *Stejn.* 834
,, fuscus, *Linn.* 834
,, affinis, *Reinhardt* . . . 835
,, schistisagus, *Stejn.* . . 836
,, marinus, *Linn.* 836
,, glaucus, *Fabricius* . . 837
,, leucopterus, *Faber* . . 838
,, glaucescens, *Naum.* . . 838
Stercorarius catarrhactes (*Linn.*) 839
,, pomatorhinus (*Temm.*) 840
,, crepidatus, *Banks* . 841
,, parasiticus (*Linn.*) . 842
Procellaria pelagica, *Linn.* . . 843
Oceanodroma leucorrhoa (*Vieill.*) 844
,, castro (*Harcourt*) . 845
,, fuliginosa (*Gmel.*) . 846
,, tristrami, *Stejn.* . 846
,, monorhis (*Swinh.*) . 847
,, furcata (*Gmel.*) . 847
Oceanites oceanicus (*Kuhl.*) . . 848
Pelagodroma marina (*Lath.*) . 849
Puffinus anglorum (*Temm.*) . . 849
,, yelkonanus (*Acerbi*) . 850
,, gravis (*O'Reilly*) . . 851
,, griseus (*Gmel.*) . . . 851
,, kuhli (*Boie*) 852
,, leucomelas, *Temm.* . . 852
,, carneipes, *Gould* . . 853
,, tenuirostris (*Temm.*) . 853
,, obscurus (*Gmel.*) . . 854

PAGE
Puffinus assimilis, *Gould* . . 854
Œstrelata hæsitata (*Kuhl.*) . . 855
,, mollis (*Gould*) . . . 855
,, brevipes (*Peale*) . . 856
,, longirostris, *Stejn.* . 856
Bulweria columbina (*Webb and Bertholet*) 857
Fulmarus glacialis (*Linn.*) . . 858
,, glupischa, *Stejn.* . . 858
Diomedea albatrus, *Pall.* . . 859
,, nigripes, *Aud.* . . 859
,, melanophrys, *Boie* . 860
Alca torda, *Linn.* 861
,, impennis, *Linn.* 862
,, troile (*Linn.*) 862
,, lomvia (*Pall.*) 863
Mergulus alle (*Linn.*) 864
Uria grylle, *Linn.* 864
,, mandti, *Licht.* 865
,, columba (*Pall.*) 866
,, carbo (*Pall.*) 866
,, snowi (*Stejn.*) 867
Brachyrhamphus perdix (*Pall.*). 867
,, brevirostris (*Vigors*). . 868
Synthliborhamphus antiquus (*Gmel.*) . 868
,, wumizusumè (*Temm.*). 869
Simorhynchus cristatellus (*Pall.*) 869
,, pygmæus (*Gmel.*) 870
,, pusillus (*Pall.*) . 870
,, psittaculus (*Pall.*) 871
Cerorhyncha monocerata (*Pall.*) 871
Lunda cirrhata (*Pall.*) . . . 872
Fratercula arctica (*Linn.*) . . 873
,, corniculata (*Naum.*) 873
Colymbus septentrionalis, *Linn.* 874
,, arcticus, *Linn.* . . 875
,, glacialis, *Linn.* . . 876
,, adamsi, *G. R. Gray* . 877
Podicipes cristatus (*Linn.*) . . 877
,, griseigena (*Bodd.*) . . 878
,, auritus (*Linn.*) . . 879
,, nigricollis, *E. L. Brehm.* 880
,, fluviatilis (*Tunstall*) . 881
Myiophoneus temmincki, *Vigors* 883
Troglodytes fumigatus, *Temm.* . 884

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CALIFORNIA

GYPS, Savigny, 1870.

710. Griffon Vulture.

GYPS FULVUS.

Gyps fulvus (Gmel.), Syst. Nat. i. p. 249 (1788); (Naum.), i. p. 162, Taf. 2, xiii. Taf. 338; (Gould), B. of E. i. pl. 1; Newton, i. p. 1; Dresser, v. p. 373, pls. 319, 320; Sharpe, Cat. B. Br. Mus. i. p. 5; Blanf. F. Brit. Ind. Birds, iii. p. 320; Saunders, p. 311; Lilford, i. p. 77, pl. 39; *G. hispaniolensis* Sharpe, Cat. B. Br. Mus. i. p. 6 (1874); *G. fulvescens* Hume, Ibis, 1869, p. 356.

Vautour Griffon, French; *Griffo,* Portug.; *Buitre,* Span.; *Grifone,* Ital.; *Gänsegeier,* German; *Bjelogolovöi Griff,* Russ.; *Nissr,* Arab.; *Enisser,* Moor.

♂ *ad.* (S. Europe). Head and neck sparingly covered with white hairs; ruff composed of white down, which is more profuse on the hind-neck; upper parts stone-buff, the middle of the larger wing-coverts darker; wings and tail darker, the former washed with grey; under parts stone-buff, the crop patch darker, with lighter stripes; bill slate; iris hazel; legs light brown. Culmen 3·4, wing 30·0, tail 14·9, tarsus 4·0 inch. Sexes alike. The young birds have the feathers on the back, scapulars, and wing-coverts pointed, the ruff feathers elongate, and fawn-coloured.

Hab. Southern Europe; of rare occurrence in Central and Northern Europe; has once been obtained in Ireland; Africa south to Nubia; Asia east to Nepal and Sikhim, south to Khandish and the Deccan.

Is essentially a carrion eater, and will feed on any refuse. It hunts by sight alone, and does not discover a carcass if covered with grass or boughs. On the ground it is heavy and inert, and where carrion is plentiful will gorge to excess. On the wing however it is active and even graceful. It breeds in communities in the rocks, constructing a carelessly built nest of sticks lined with grass which is placed on the bare rock, and from February to April it deposits a single egg, or sometimes two, which are white, rather rough in shell, but occasionally, though rarely, the egg is slightly spotted with red. In size they average 3·63 by 2·72.

711. Himalayan Griffon.

GYPS HIMALAYENSIS.

Gyps himalayensis, Hume, Rough Notes, p. 12 (1869); Sharpe, Cat. B. Br. Mus. i. p. 8; Blanford, F. Brit. Ind. Birds. iii. p. 321; *G. nivicola*, Severtzoff, Turk. Jevot. p. 111. pl. vii. (1873).

Zaigan Tasso, Mongol.; *Gutıncar,* Tangut.

♂ *ad.* (Nepal). Differs chiefly from *G. fulvus* in having the shaft-stripes on the lower plumage very broad and the fourth, and not the third primary longest; upper parts pale isabelline white tinged with brown, and with obsolete pale shaft-stripes, the lower back whitish, the rump and upper tail-coverts buff; quills and tail blackish brown, the inner secondaries fulvous at the tips; crop-patch brownish with paler stripes; rest of under parts light brownish buff with broad whitish shaft stripes; under tail-coverts pale buff; bill pale horny green; cere pale brown; legs dingy greenish grey; iris brownish yellow. Culmen 3·7, wing 30, tail 15·5, tarsus 4·6 inch. Sexes alike. The young are dark brown strongly striped with whitish, and the wing and tail-feathers are nearly black.

Hab. The Himalayas from Cabul to Bhutan, Turkestan, Kan-su, Koko-nor, and Northern Tibet.

Is essentially a mountain bird, only descending to lower altitudes when compelled to do so in search of food, and in its general habits it agrees closely with *G. fulvus.* It breeds at high altitudes from late in December to early in March, constructing a platform of sticks in the most inaccessible parts of the rocks, usually on the face of a cliff, and occasionally it will take possession of a deserted Eagle's nest. Only a single egg is deposited, which is greyish white usually blotched and stained with reddish brown, and measures about 3·76 by 2·75.

VULTUR, Linn., 1766.

712. Black Vulture.

VULTUR MONACHUS.

Vultur monachus, Linn. Syst. Nat. i. p. 122 (1766); Dresser, v. p. 383, pl. 321; Sharpe, Cat. B. Br. Mus. i. p. 3; Blanford, F. Brit. Ind. Birds, iii. p. 317; *V. cinereus,* Gmel. Syst. Nat. i. p. 247 (1788); Naum. i. p. 155, Taf. i.; Gould, B. of E. i. pl. 2.

Vautour arrian, French; *Pica osso,* Portug.; *Buitre negro,* Span.; *Avvoltoio nero,* Ital.; *Kuttengeier,* German; *Grågrib,* Dan.; *Chernoburui Griff,* Russ.; *Kála-gidh,* Hindu.

♂ *ad.* (S. E. Europe). Head and neck covered with hair-like feathers, ruff brownish; general colour of the plumage brownish, the quills and tail-feathers blackish brown; bill dark horn; cere pale mauve, naked skin of the neck livid flesh colour; legs and feet pearly white; iris brown. Culmen 3·3, wing 30·0, tail 17·0, tarsus 4·0 inch. The young bird is much darker, blackish brown in colour, wings and tail nearly black.

Hab. Southern Europe; a rare straggler to the northern parts of Continental Europe; North Africa, rarer in the western portions, in East Africa south to Nubia; Asia Minor and Central Asia to India and China.

In habits it resembles the Griffon, and like that bird is a carrion eater. It breeds about the same time as the Griffon, but unlike that species almost always places its nest in a tree, more seldom on a cliff. The nest is a bulky structure of boughs and sticks, lined with small twigs and wool, and one egg is deposited, very rarely two, which is white, richly marked with dark red, and the average size is 3·51 by 2·76. Eggs from Eastern Europe are as a rule less richly marked than those from Spain.

NEOPHRON, Savigny, 1810.

713. EGYPTIAN VULTURE.

NEOPHRON PERCNOPTERUS.

Neophron percnopterus (Linn.), Syst. Nat. i. p. 123 (1766); (Naum.) i. p. 170, Taf. 3; (Hewitson), i. p. 5. pl. 2; Gould, B. of E. i. pl. 3; Newton, i. p. 6; Dresser, v. p. 391, pl. 322; Sharpe, Cat. B. Br. Mus. i. p. 17; Blanford, F. Brit. Ind. Birds. iii. p. 327; Saunders, p. 313; Lilford, i. p. 83, pl. 40.

Vautour d'Égypte, French; *Abutre,* Portug.; *Alimocho,* Span.; *Capovaccajo,* Ital.; *Schmutziger Aasvogel,* German; *Stervatnik,* Russ.; *Rakhma,* Arab.; *Rekhama,* Moor.; *Ak-baba,* Turk.; *Kusgun,* Tartar.

♂ *ad.* (Spain). General colour white, tinged with creamy buff; forepart of the head and throat bare; feathers on the occiput and back of the neck elongated, lanceolate, tinged with creamy buff; primaries blackish margined with greyish buff on the outer web; secondaries varied, dark brown and buff; tail white; bare part of the head yellow; beak yellow at the base, otherwise dusky blackish; legs and feet dark flesh-colour, claws black; iris deep red. Culmen 2·8, wing 19·2, tail 10·0, tarsus 3·4 inch. Sexes alike. The young bird is blackish brown, the feathers tipped with fulvous, the bare part of the head with scattered blackish brown tufts; bare portions of the head livid; bill dusky yellowish at the base; legs livid greyish; iris brown.

Hab. Southern Europe, of rare occurrence north of the Alps; has twice occurred in England; Madeira, the Canaries, and Cape Verde Islands; Africa south to the Cape of Good Hope; Asia east to Western India. There it meets with

N. ginginianus, which replaces it further east, and which is distinguishable by having the bill entirely yellow, and being smaller in size.

Like its allies it is a carrion feeder, and as nothing is too offensive for its palate it is, in southern climes, a most useful scavenger. Except when collected round a carcase it is usually to be seen singly or in pairs, never in flocks, and it likewise breeds in scattered pairs. Its nest, which is generally placed on a cliff, seldom on a tree, is a clumsy structure of sticks and grass, lined with grass, rags, or any other available soft material, and its eggs, 2 in number, occasionally however only 1, are deposited in April or May, and are richly blotched with rusty red or dark red on a white or yellowish white ground, and in size average 2·57 by 2·01.

GYPAETUS, Storr, 1874.

714. BEARDED VULTURE.

GYPAETUS BARBATUS.

Gypaetus barbatus (Linn.), Syst. Nat. i. p. 123 (1766) ; Naum. i. p. 180, Taf. 4, 5 ; Gould, B. of E. i. pl. 4 ; Dresser, v. p. 401, pls. 323, 324, 325 ; Sharpe, Cat. B. Br. Mus. i. p. 228 ; Blanf. F. Brit. Ind. Birds, iii. p. 328.

Gypaète des Alpes, French ; *Quebranta-huesos,* Span. ; *Avvoltojo barbuto,* Ital. ; *Lämmergeier,* German ; *Jagnjatnik,* Russ. ; *Tochligöturän,* Tartar ; *Bou-l'achiah,* Arab. ; *Argul,* Hindu.

♂ *ad.* (Spain). Crown and neck creamy white washed with rust-colour ; bristles on the chin, lores, and a broad line passing over and round the eye deep black ; upper parts blackish grey with a metallic gloss, the upper back and wing-coverts with a yellowish central line on the feathers ; quills blackish grey washed with slate-grey ; tail slate-grey margined with blackish brown, and wedge-shaped ; under parts rich light rusty yellow, the throat and neck washed with rusty red ; bill bluish horn, blackish at the tip ; feet plumbeous ; iris pale orange, the sclerotic membrane blood-red. Culmen 3·8, wing 31·0, tail 20·0, tarsus 4·1 inch. Sexes alike. The young bird of the year has the head, neck, and upper parts blackish brown, and the under parts dull rufons buff or brownish grey.

Hab. The mountains of Southern Europe and North Africa ; is still found in the French and Spanish Pyrenees, but is nearly if not quite extinct in the Alps and Tyrol ; Bosnia, Greece, Turkey, the Caucasus, and Asia Minor ; the Himalaya as far east as Sikhim; North China, Tibet, Mongolia, and Dauria.

Inhabits the higher mountain ranges, and is solitary in its habits. It feeds on carrion, refuse, etc., like the Vultures, and though it is said to attack lambs and kids and even goats and chamois, it is doubtful if this is the case, except when the animal is weakly or in a dying state; it is a cowardly bird, and will allow itself to be bullied by a Falcon not a fourth of its size. Its note is a feeble, querulous cry. It breeds in the high mountains in a cave or on a shelf of the cliff, its nest being a bulky structure of sticks, etc., lined with wool, hair, or any soft material, and from the end of December to May, according to locality, it deposits 2 eggs, dull yellowish or rusty orange in colour, measuring about 3·18 by 2·47.

CIRCUS, Lacép., 1851.

715. MARSH-HARRIER.

CIRCUS ÆRUGINOSUS.

Circus æruginosus (Linn.), Syst. Nat. i. p. 130 (1766): Gould, B. of Gt. Brit. i. pls. 24, 25; Hewitson, i. p. 44, pl. xvi. fig. 1; Newton, i. p. 127; Dresser, v. p. 415, pls. 326, 327; Sharpe, Cat. B. Br. Mus. i. p. 69; Radde. Orn. Caucas. p. 106, Taf. iii.; Blanf. F. Brit. Ind. Birds. iii. p. 387; Saunders, p. 315; Lilford, i. p. 67, pls. 34, 35; *C. rufus* (Gmel.), Syst. Nat. i. p. 266 (1788); (Naum.), i., p. 378, Taf. 37, 38, fig. 1; Gould, B. of. E. pl. 32.

Busard des marais, French; *Aguilucho*, Span.; *Milhano*, Portug.; *Falco di padule*, Ital.; *Rohrweihe*, German; *Rietwouw*, Dutch; *Rödbrun Kjærhög*, Dan.; *Rostbrun Kärrhök*, Swed.; *Kamyschevoi Lun*, Russ.; *Kamysch-Kara*, Tartar; *Hedia*, Moor.; *Bouschrada*, Arab.; *Kutar*, *Kulesir*, Hindu.

♂ *ad.* (Spain). Crown and nape yellowish white striped with chocolate and blackish brown; back and scapulars blackish chocolate slightly marked with dark fulvous; tail ashy grey tipped with yellowish buff; primaries blackish brown, the inner ones marked with ashy grey, secondaries and larger wing-coverts dark silvery grey; smaller coverts blackish chocolate marked with whitish; chin dirty white; breast yellowish white marked with reddish brown; rest of under parts rusty brown striped or marked with darker brown; bill horn; legs and cere yellow; iris lemon yellow. Culmen 1·32, wing 14·8, tail 8·9, tarsus 3·3 inch. The old female is rather larger than the male, has the crown, nape, and chin creamy white, the two former striated with blackish; back white marked with umber, the rump ochreous; wings and tail dark brown white with a creamy white margin along the edge of the wing; throat warm ash-brown; rest of the under parts dark brown with a white band marked with brown across the breast. The young birds are dark chocolate-brown, the crown, nape, chin, and upper throat warm orange-buff, but they vary a good deal as regards the amount of buff on the head, and as in other Harriers dark blackish varieties occur, one figured by Dr. Radde (*l.c.*) being all dark brown, the upper parts with rufous margins to the feathers, and the tail grey washed with pale brown.

Hab. Europe; in Sweden seldom found above 60° N. Lat., and of very rare occurrence in Norway and Finland; Great Britain; Africa as far south as the Transvaal; Asia east as far as China and Japan and throughout India and Ceylon; in winter south to the Philippines.

Is essentially a marsh-haunting bird, and is generally to be met with in damp swampy places, especially where water-birds breed in numbers. In the northern portions of its range it is a migrant but a resident in the south. As a rule it is a silent bird, but in the breeding season the male may be heard uttering a clear, loud call *keew*, that of the female being a clear prolonged shrill *pee-ep*. It feeds on frogs, small snakes, small mammals, young birds, and eggs, and is very destructive to the breeding colonies of water-birds. Being however cowardly and not possessing much power of flight it will not attack any but the smaller or weakly birds, and it is doubtful if it dare even attack a rat. Its nest, which is a carelessly constructed bulky structure of sticks, reeds, and flags, is placed on the ground or on the masses of half floating marsh herbage, and its eggs, 4 to 5, seldom 6 in number, are usually laid in April or May, and are unspotted, greenish or blue-greenish-white in colour, rather roundish in shape, and measure about 1·95 by 1·51.

716. EASTERN MARSH-HARRIER.

CIRCUS SPILONOTUS.

Circus spilonotus, Kaup. in Jardine's Contrib. Orn. 1850, p. 59; Swinhoe, Ibis, 1863, pl. v.; Sharpe, Cat. B. Br. Mus. i. p. 58; David and Oust. Ois. Chine, p. 29; Blanf. F. Brit. Ind. Birds. iii. p. 388; Tacz. F. O. Sib. O. p. 112.

Khoulda, in Darasun.

♂ *ad.* (Siberia). Differs from the very old male of *C. æruginosus* chiefly in lacking all the rufous tinge on the upper tail-coverts and all the under parts; crown, nape, forepart of the back, scapulars, and edge of the wing white tinged with buff and streaked with blackish brown; back and inner secondaries blackish brown sparingly spotted or blotched with dull white; outer primaries blackish; the rest of the wing silvery grey; upper tail-coverts white faintly barred with grey; tail grey with a brownish tinge, the outer feathers whiter; under parts white, the chin, throat, and breast streaked with blackish brown; soft parts as in *C. æruginosus.* Culmen 1·6, wing 15·5, tail 9·25, tarsus 3·5 inch. The female is larger and differs from that of *C. æruginosus* in having the crown blackish brown marked with rufous buff, and the tail with dark bands which are nearly obsolete in very old birds. The young bird closely resembles that of *C. æruginosus.*

Hab. Of doubtful occurrence in India; South-east Siberia, Mongolia, China, Burma, and Japan, south to the Philippines and the Malay peninsula.

In habits it closely resembles *C. æruginosus*, but is said to be more kite-like in appearance. Its food is similar to that of the Marsh-Harrier, and like that species it feeds largely on the eggs of ground-nesting birds. Its nest, which is placed in damp marshy places, often on masses of floating herbage, is a clumsy structure of dry herbage, and the eggs, which are usually deposited in June, are white tinged with greenish blue and measure about 1·90 by 1·50.

717. MONTAGU'S HARRIER.

CIRCUS CINERACEUS.

Circus cineraceus (Montag.), Orn. Dict. i. sheet K. 3. (1802); (Naum.) i. p. 402, Taf. 40; Gould, B. of E. i. pl. 35; Hewitson, i. p. 49, pl. xvi. fig. 3; Newton, i. p. 38; Dresser, v. p. 423, pl. 328; Blanf. F. Brit. Ind. Birds, iii. p. 383; Saunders, p. 319; Lilford, i. p. 73, pls. 37, 38; *C. cinerarius*, Leach, Syst. Cat. Mam. etc. Brit. Mus. p. 9. (1816); *C. cinerascens*, Steph. Gen. Zool. xiii. p. 41 (1825); Gould, B. of Gt. Brit. i. pl. xxvii; *C. pygargus*, Sharpe, Cat. B. Br. Mus. i. p. 64; David and Oust. Ois. Chine, p. 28 (nec. Linn.); *C. montagui.* Vieill. Nouv. Dict. xxxi. p. 411 (1819).

Busard cendré, French; *Aguia caçadeira*, Portug.; *Cenizo*, Span.; *Albanella minore*, Ital.; *Wiesenweihe*, German; *Graauwe Kuikendief*, Dutch; *Graa Kjaerhög*, Dan.; *Mindre Kärrhök*, Swed.; *Lugovoi Lun*, Russ.; *Bouschrada*, Arab.; *Dastmal*, Hindu.; *Pandouvi*, Beng.

♂ *ad.* (Spain). Head, neck, breast, and upper parts ashy blue-grey darker on the upper parts; secondaries with two hidden and one conspicuous blackish bar; primaries black; tail ashy blue-grey; the outer feathers paler and barred with reddish; under parts greyish white striped with chestnut-red; bill blackish horn; cere, iris, and legs yellow. Culmen 1·05, wing 14·8, tail 10·0, tarsus 2·5 inch. The female is somewhat larger and has the upper parts brown varied with rusty rufous, the quills and middle tail-feathers tinged with grey and barred with blackish brown; the outer tail-feathers greyish white tinged with rufous and barred with brown; under parts warm ochreous striped with rusty brown. Young birds have the under parts tinged with rufous and unstriped. This species is subject to melanism and uniform blackish brown varieties are occasionally met with.

Hab. A summer visitor to the British Islands and Continental Europe generally, more numerous in the south. Of occasional occurrence in Sweden, and has once been obtained in Finland; Africa south to Cape Colony; Asia east to China, wintering in India and Ceylon.

Like its allies it affects open plains and marshes, and never perches or roosts in a tree, but passes the night on the ground amongst the grass or aquatic plants. It flies low and quarters the ground carefully. It feeds on insects, mice, small reptiles, small birds, and the eggs of ground-nesting species, and in Spain wherever there were colonies of Terns, Stilts, etc., I found nests of this Harrier. The nest is placed on the ground or on floating masses of reeds, and is constructed of grass and flags of less coarse materials and better made than that of the Hen-Harrier, and the eggs, 4 to 6 in number, are usually deposited in May and resemble those of *C. æruginosus* but are smaller, measuring about 1·49 by 1·25.

718. Pallid Harrier.

CIRCUS SWAINSONI.

Circus swainsoni, Smith, S. Afr. Quart. Journ. i. p. 384 (1830); Dresser, v. p. 441, pl. 330; ? *C. macrourus* (S. G. Gmel.) N. Com. Petr. xv. p. 439 (1771); Sharpe, Cat. B. Br. Mus. i. p. 67; Blanf. F. Brit. Ind. Birds, iii. p. 381; *C. pallidus*, Sykes, P.Z.S. 1832, p. 80; Gould, B. of E. i. pl. 34; Naum. xiii. p. 154, Taf. 348.

Busard pâle, French; *Albanella chiara*, Ital.; *Steppenweihe*, German; *Steppehög*, Dan.; *Blek Kärrhök*, Swed.; *Stepnoi Lun*, Russ.; *Ach-Asalagan*, Tartar.; *Dastmal*, Hindu.

♂ *ad.* (India). Upper parts blue-grey, the head paler; upper tail-coverts white barred with dark blue-grey; middle tail-feathers blue-grey, the rest white barred with dark blue-grey; primaries pale at the base becoming blackish towards the tip, the first dark ashy blue; under parts white, the flanks indistinctly striped; bill blackish; cere, iris, and legs yellow. Culmen 1·15, wing 13·8, tail 9·2, tarsus 2·9 inch. The female resembles that of *C. cineraceus* but is paler and less rufous, and the ruff is more distinctly defined.

Hab. Central, Southern, and Eastern Europe, of rare occurrence in Scandinavia, and only twice recorded from Finland; Africa in winter, south to the Cape; Asia, throughout India, Ceylon and Burma east to the Yangtse river in China.

In habits it resembles the Hen-Harrier but is less of a marsh-bird and frequents the steppes, fields, etc.; its flight is slow, a few beats of the wings alternating with a sailing motion, and it usually perches on the ground, on a mound or stone. Its food consists of insects, reptiles, small rodents, and birds, especially when the last are weakly or wounded. Its nest is a depression in the ground lined with grass-bents and leaves, and its eggs, 4 to 5 in number, are deposited in May and are bluish white, roundish in shape, and sometimes marked or spotted with rich deep red. In size they average 1·68 by 1·34.

The chief distinctions between the European Harriers are as follows:—

C. æruginosus.—The ruff is interrupted in front, and the folded wings do not reach to the end of the tail.

C. cineraceus.—Ruff interrupted in front; first four primaries only emarginate on the outer web, the emargination on the second fully an inch beyond the wing-coverts; flanks striped with rufous in the adult male.

C. swainsoni.—Ruff complete; emargination on the second primary close to and almost hidden by the wing-coverts; the four first primaries only emarginate on the outer web; upper tail-coverts in the adult male white barred with grey.

C. cyaneus.—First five primaries emarginate on the outer web; ruff complete and not interrupted; upper tail-coverts in the adult male white.

719. Hen-Harrier.

CIRCUS CYANEUS.

Circus cyaneus (Linn.), Syst. Nat. i. p. 126 (1766); Gould, B. of E. i. pl. 33; Hewitson, i. p. 47, pl. xvi. fig. 2; Gould, B. of Gt. Brit. i. pl. 26; Newton, i. p. 132; Dresser, v. p. 431, pl. 329; Sharpe, Cat. B. Br. Mus. i. p. 52; David and Oust. Ois. Chine, p. 27; Blanf. F. Brit. Ind. Birds, iii. p. 384; Saunders, p. 317; Lilford, i. p. 69, pl. 36; *C. pygargus*, Naum. i. p. 391, Taf. 38, fig. 2, Taf. 39.

Busard St. Martin, French; *Pilharatos*, Portug.; *Ave de San Martin*, Span.; *Albanella reale*, Ital.; *Kornweihe*, German; *Blaauwe Kuikendief*, Dutch; *Blaa Kjærhög*, Dan. and Norweg.; *Blå-Kärrhök*, Swed.; *Sinihaukka*, Finn.; *Polevoi Lun*, Russ.; *Bou-hasin*, Moor.

♂ *ad.* (Scotland). Upper parts and middle tail-feathers ashy blue-grey, rather darker on the back ; primaries blackish ; upper tail-coverts white ; lateral tail-feathers greyish white, narrowly barred with brownish ; breast paler than the head, the rest of the under parts gradually fading to white ; bill blackish horn ; cere, iris, and legs yellow. Culmen 1·1, wing 13·4, tail 8·9, tarsus 2·62 inch. The female has the forehead and a faint superciliary stripe buff ; upper parts dark brown, the head and neck striped, the back well marked with warm buff ; upper tail-coverts white, sparsely dotted with rufous ; tail dark brown with a light tip, barred with greyish brown and rufous buff ; under parts buff striped with dull brown and reddish brown ; iris brown ; legs and cere yellow.

Hab. Europe generally, from Lapland to the Mediterranean ; British Islands ; Africa south to Abyssinia ; Asia east through India to China, Tibet, Mongolia, Japan, and Siberia, and southward to the central provinces of India.

Frequents open places, heaths, plains, and marshes, and is not found in the woodlands. Its flight is graceful, not high above the ground, and it will hover every now and again when quartering. It feeds on small mammals and birds, insects, reptiles, etc., and like its allies it feeds largely on the eggs of ground-nesting birds. Its nest is a depression in the ground, frequently in a damp locality, and consists merely of a few sticks and heather-bents with a little dry grass. The eggs, 4 to 5 in number, are generally deposited late in May, and are bluish white, usually unmarked, and measure about 1·81 by 1·39. I have, however, seen eggs slightly, and others somewhat boldly, marked with dark red.

720. PIED HARRIER.

CIRCUS MELANOLEUCUS.

Circus melanoleucus (Forster), Ind. Zool. p. 12, pl. ii. (1781) ; David and Oust. Ois. Chine, p. 29 ; Sharpe, Cat. B. Br. Mus. i. p. 61 ; Tacz. F. O. Sib. O. p. 120 ; Blanf. F. Brit. Ind. Birds, iii. p. 385.

Pahatai, Hindu. ; *Thane-Kya*, Burm.

♂ *ad.* (India). Head, neck, breast, back, the middle wing-coverts, and a band to the end of the wing glossy black ; scapulars black marked with grey ; outer primaries black but not so glossy ; rump and upper tail-coverts white ; the latter faintly barred with grey ; tail grey tipped with white ; edge of wing and least wing-coverts white, the rest of the wing grey ; lower breast and under parts with the under wing-coverts pure white ; bill bluish at the base, otherwise blackish ; cere dusky yellow ; legs orange-yellow ; iris bright yellow. Culmen 1·0, wing 13·7, tail 8·5, tarsus 3·2 inch. The female is larger, has the black in the plumage replaced by dark brown, the crown and nape feathers with rufous margins, the ruff of dull white feathers with brown shaft-stripes well defined, the tail grey with blackish brown cross-bars, and the under parts white, the throat and breast broadly, the abdomen narrowly striped with dark brown. The young bird has the under parts rufous brown darker streaked, the nuchal patch whitish, streaked with brown, the outer tail-feathers rufous in ground colour and no grey on the wings.

Hab. The eastern part of India; Burma; Mongolia; south-eastern Siberia; northern China; Cochin China; Siam; Malacca, and the Philippines.

Affects the plains, especially damp swampy localities, and rice-fields. Its food, like that of its allies, consists of reptiles, frogs, insects, small rodents, and birds. Its nest, a somewhat slight structure resembling that of *C. cineraceus*, is placed on the ground, usually in a damp or swampy locality, and the eggs, 4 to 5 in number, which are usually deposited in June resemble those of *C. cineraceus*, and measure about 1·69 by 1·37.

BUTEO, Cuvier (1800).

721. THE BUZZARD.

BUTEO VULGARIS.

Buteo vulgaris, Leach, Syst. Cat. Mamm. &c. p. 10 (1816); Gould, B. of E. i. pl. 14; id. B. of Gt. Brit. pl. 6; Hewitson, i. p. 38, pl. xiv. figs. 1, 2; Newton, i. p. 109; Dresser, v. p. 449, pl. 331; Sharpe, Cat. B. Br. Mus. i. p. 186; Saunders, p. 321; Lilford, i. p. 16. pl. 9; *Falco buteo*, Linn. Syst. Nat. i. p. 127; (1766); Naum. i. p. 346, Taf. 32, 33; *B. plumipes*, Hodgs. P.Z.S. 1845, p. 37; Sharpe, tom. cit. p. 180; *B. japonicus* (Temm. and Schlegel), Faun. Jap. Aves, p. 16, pls. vi. vi.b. (1850); *B. desertorum*, Blanf. F. Brit. Ind. Birds, iii. p. 393 (partim, nec. Daud.).

Buse commune, French; *Minhôto*, Portug.; *Pella*, *Arpella*, Span.; *Pojana*, Ital.; *Mäusebussard*, German; *Buizerd*, Dutch; *Musvaag*, Dan. and Norweg.; *Ormvråk*, Swed.; *Käärmehaukka*, Finn.; *Obiknovennui Saritcha*, Russ.

♂ *ad.* (Germany). Upper parts dark earth-brown with a faint metallic gloss and slightly varied with dull reddish brown, the forehead and nape marked with dull white; quills blackish brown on the outer web, the basal half of the inner web white barred and marbled with brown; tail dark brown tipped with light brown, and barred with greyish brown; under parts dark brown marked and barred with yellowish white and dull white, the throat and sides of head whiter; beak blackish horn lighter at the base; cere and legs yellow, the tarsus bare or sometimes partly feathered in front; iris brown. Culmen 1·3, wing 14·8, tail 8·8, tarsus 3·1 inch. Female similar but somewhat larger. This species is subject to extreme variety, from nearly white to almost uniform blackish brown, and the feathering on the tarsus is also extremely variable, but is oftener seen on eastern specimens.

Hab. Europe generally, north as far as Trondhjem and Kajana; British Islands; Madeira, Canary, and Cape Verde Islands; rare in N. Africa; Asia as far east as Japan, India and Ceylon in winter.

Is a migrant in the northern portion of its range, but as a rule a resident in the southern part. It is somewhat heavy and lazy, seldom attacking any but young, weakly, or small birds, or mammals, its food consisting chiefly of small rodents, reptiles, large insects, larvæ, and even carrion. It may often be seen at a considerable altitude, circling on the wing with ease, and uttering its clear, loud, mewing cry. It frequents both the woodland and the open heaths and rocky localities. It is a somewhat early breeder and nests either in the rocks or on non-evergreen trees, sometimes high up and at others at no great altitude. The nest is constructed of boughs and twigs, lined with grass, wool, moss, and even a few feathers, or sometimes a deserted crow's nest is repaired and utilized. The eggs, 2 to 4 in number, are deposited from late in March to May and are bluish white, sometimes almost unmarked but generally tolerably well marked and blotched with violet-grey, or rarely pale brown shell-markings and reddish brown surface-spots, roundish in shape, and measure about 2·21 by 1·81.

722. SUBSP. BUTEO ZIMMERMANNÆ.

Buteo zimmermannæ, Ehmcke, Ber. Febr. Sitz. Allg. Deutsche Orn. Gesellsch. No. 2 (1893); Kleinschmidt, Orn. Monatsschr. 1898, p. 214, Taf. x.

♀ *ad.* (Type). Differs from the adult of *B. vulgaris* in being smaller, and very rufous in tone of colour, and from that of *B. desertorum* in having the abdomen and under tail-coverts white, distinctly barred with rufous, the tail also being distinctly barred. (Bill damaged), wing 14·32, tail 8·25, tarsus 2·90 inch. The young birds of *B. vulgaris*, *B. desertorum*, and of the present subspecies are much alike.

Hab. Eastern Germany and North Russia as far north as Archangel.

In habits it does not appear to differ from *B. vulgaris*.

723. SUBSP. BUTEO DESERTORUM.

Buteo desertorum (Daud.), Traité d' Orn. ii. p. 162, (1800); Layard, B. of S. Afr. p. 9; Shelley, B. of Egypt, p. 201; Dresser, v. p. 457, pl. 332; Sharpe, Cat. B. Br. Mus. i. p. 179; Blanf. F. Brit. Ind. Birds. iii. p. 393 (partim); *B. cirtensis*, Levaill jr. Expl. Sc. de l'Alg. pl. 3. (1850); *B. menetriesi*, Bogd. Ptitsui. Kavkaza, p. 45 (1879).

Baffa, Arab.

♂ *ad.* (N. Africa). Differs from *B. vulgaris* in being as a rule smaller, in having the feathers on the upper parts margined with rusty red, the tail with a blackish brown subterminal band, the middle feathers rusty red with obsolete bars, and the under parts pale rufous, most of the feathers with dark centres. Culmen 1·4, wing 14·5, tail 8·2, tarsus 2·7 inch. The female is similar but rather larger. The young bird resembles *B. vulgaris* but is smaller, has the upper parts marked with rufous and the thigh-feathers slightly marked with rufous.

Hab. South-eastern Europe; of accidental occurrence in south-western Europe, but in eastern Europe as far north as Archangel; Africa south to the Cape Colony; Asia as far east as India where it is a winter visitant.

In habits it resembles *Buteo vulgaris*, of which species it is a rufous, desert form, and in fact Mr. Blanford (l.c.) unites the two specifically, a course which I do not feel justified in following. The African Buzzard is said to be a more graceful and active bird than *B. vulgaris* and more of an insect feeder, on the shores of the Bosphorus feeding chiefly on grasshoppers, when in the autumn these latter abound.

Its nest is placed in a tree at no great altitude, or else in a convenient cleft in a rock and is constructed of sticks and twigs, lined with grass and wool. The eggs, 2 to 3 in number, are usually deposited in April, and resemble those of *B. vulgaris*, but are, as a rule, less marked with reddish-brown than those, and measure about 2·08 by 1·65.

724. UPLAND BUZZARD.

BUTEO LEUCOCEPHALUS.

Buteo leucocephalus (Hodgson), P.Z.S. 1845, p. 37; Blanf. F. Brit. Ind. Birds, iii. p. 392; *B. aquilinus*, Blyth, J.A.S. Beng. xiv. p. 176 (1845); *B. hemilasius*, Temm. and Schlegel. Faun. Jap. Aves, p. 18, pl. vii. (1850); Sharpe, Cat. B. Br. Mus. i. p. 182; David and Oust. Ois. Chine, p. 19, pl. 9; (Tacz.) F. O. Sib. O. p. 60; *B. ferox*, Sharpe, tom. cit. p. 178. pl. viii. (1874 partim, nec. Gmel.)

♂ *ad.* (Dauria). Head and neck white broadly but sparingly streaked with pale brown ; upper parts pale dull earth-brown some of the feathers with pale margins ; quills dark brown the basal portion of the inner webs white ; tail greyish barred with dark brown ; under parts white streaked with brown ; tarsus feathered in front from one- to two-thirds of its length ; bill bluish horn ; cere greenish yellow ; legs and feet wax-yellow ; iris light buff. Culmen 1·9, wing 19·15, tail 10·75, tarsus 3·7 inch. Male similar but somewhat smaller.

Hab. Kashmir, Sikhim, Tibet, China, Eastern Siberia; Japan as an accidental visitant.

Is nearly related to *B. ferox* and bears much the same relation to that species as *B. vulgaris* does to *B. desertorum*. In habits also it resembles that species, and is generally to be met with in the open country. It breeds commonly in south-eastern Siberia, in Dauria on the steppes near the Onon river, and in the vicinity of Argoun, the nest being placed on a rock. The eggs 2 to 4 in number are usually deposited in May and vary, from white very sparingly marked, to bluish white or white with a faint reddish tinge richly spotted and blotched with reddish brown, and in size average 2·44 by 1·92.

725. LONG-LEGGED BUZZARD.

BUTEO FEROX.

Buteo ferox (S. G. Gmel.), N. Comm. Petrop. xv. p. 442, tab. x. (1769) ; Shelley, B. of Egypt, p. 201, pl. ix ; Dresser, v. p. 463, pl. 333 ; Blanf. F. Brit. Ind. Birds, iii. p. 390 ; *B. rufinus* (Cretzschm), in Rüpp. Atlas. p. 40, Taf. 27 (1826) ; *B. leucurus*, Naum. in Naumannia, 1853, p. 256, pl. 5 ; *B. nigricans*, Severtz. Turk. Jevot. pp. 63 and 112 (1873).

Weissschwänziger Adlerbussard, German ; *Stepnoi Sarytsch*, Russ. ; *Zard*, Tartar ; *Chuhumar*, Hindu.

♂ *ad.* (S. Russia). Crown and nape creamy rufous and brown the white bases of the feathers showing through ; upper parts dark brown margined with tawny rufous, the dull grey bases of the wing-coverts showing here and there ; quills dark brown, the outer web washed with silvery grey, the basal part of the inner web of the primaries white ; tail creamy white at the base, darkening to creamy rufous towards the tip ; sides of head, chin, throat, and upper breast creamy white washed with rufous, the two first with dark shaft-stripes ; lower breast and under parts tawny rufous mixed with brown, the flanks and sides chestnut ; under tail-coverts creamy rufous ; bill horn-blue, darker towards the tip ; cere yellowish green ; legs dull lemon-yellow ; iris tawny yellowish.

Culmen 1·8, wing 16·7, tail 9·5, tarsus 3·7 inch; tarsus feathered to about 2 inches from the base of the toes. Female similar but rather larger. Young birds are darker and browner, have the under parts dull rufous striped with blackish brown, and the tail grey barred with blackish brown and slightly marked and tipped with rufous. This species is also subject to melanism, and very dark varieties are sometimes met with.

Hab. South-eastern Europe, south through Asia Minor and Palestine; East Africa, south to Nubia and Abyssinia; Central Asia, Persia; the Himalayas east to Sikhim and N. W. India in winter.

In general habits it resembles *B. vulgaris* but is a heavier and more sluggish bird, frequenting open plains and steppes, and feeds on small mammals, lizards, and snakes, or, where there is water, on frogs. Its nest is constructed of grass or flags, lined with hair, wool, or rags, and is generally placed on the ground or on a rock, though occasionally on a tree. The eggs, 3 or 4, occasionally 5 in number, are usually deposited in April are white faintly clouded with reddish, and more or less spotted and blotched with rich brownish red, in size averaging 2·32 by 1·82.

BUTASTUR, Hodgson, 1843.

726. GREY-FACED BUZZARD-EAGLE.

BUTASTUR INDICUS.

Butastur indicus (Gmel.), Syst. Nat. i. p. 264 (1788); Sharpe, Cat. B. Br. Mus. i. p. 297; Blanf. F. Brit. Ind. Birds, iii. p. 365; Seebohm, B. Jap. Emp. p. 196; Tacz. F. O. Sib. O. p. 69.

Sashiba, Hachikuma, Japan.

♂ *ad.* (Japan). Head and neck greyish; sides of forehead and lores white with black bristles; upper parts brown, the feathers with dark shafts, the nape marked with white; wing-coverts and secondaries externally more or less marked with rufous; quills brown, the inner webs reddish brown, tipped with blackish and barred with brown; tail brown above with blackish cross-bars, and whity brown below; throat white with one median and two lateral dark stripes; under parts ashy brown tinged with rufous, the upper breast with a few white spots; lower breast and abdomen sparsely barred with brown; under tail-coverts white; base of bill and cere orange yellow, the end of the bill black; legs feet and iris bright yellow. Culmen 1·3, wing 13·0, tail 7·7, tarsus 2·2 inch. Sexes alike.

Hab. South-eastern Siberia, where it is of rare occurrence in the Ussuri country; Japan; China; Tenasserim; Malacca; the Malayan islands south to New Guinea.

I do not find anything on record respecting the habits of this species, except that the Abbé David states that it breeds regularly in the mountains near Pekin, that its flight is swift and easy, unlike that of the true Buzzards, and that its cry consists of two notes and is also quite characteristic.

Mr. Alan Owston of Yokohama says that it breeds at Fuji, the Sagami Hills, Oiso, Fukushima, and Iwaki in Japan, nesting on "Momi," "Momiso," and pine trees, at 20 to 150 feet from the ground, and that he received its eggs, 4 in number, taken from the 16th to the 20th May.

ARCHIBUTEO, Brehm, 1828.

727. Rough-legged Buzzard.

ARCHIBUTEO LAGOPUS.

Archibuteo lagopus (Gmel.), Syst. Nat. i. p. 260 (1788); Naum. i. p. 359 Taf. 34; (Hewitson), i. p. 39, pl. xiv. fig. 3; (Gould), B. of E. i. pl. 15; id. B. of Gt. Brit. i. pl. viii.; (Newton), i. p. 115; Dresser, v. p. 471, pls. 334, 335; Sharpe, Cat. B. Br. Mus. i. p. 196; Tacz. F. O. Sib. O. p. 56; (Saunders), p. 323; Ridgway, p. 240; Lilford, i. p. 19, pl. 10; Newton, Ootheca Wolleyana, i. p. 121, pls. v, vi.

Buse pattue, French; *Poiana calzata*, Ital.; *Rauhfuss-Bussard*, German; *Ruigpoot Buizerd*, Dutch; *Laadenbenet Musevaage*, Dan.; *Fjeldvaage*, Norw.; *Fjellvråk*, Swed.; *Poaimas, Biekkan*, Lapp.; *Piekana*, Finn.; *Kaniuk machnogii*, Russ.

♂ *ad.* (Sweden). Crown and nape creamy white, boldly striped and blotched with dark brown; upper parts dark brown, marked with creamy white and pale rufous, the lower back and rump almost uniform dark brown; quills dark brown, the basal half of the inner web white; tail white, becoming greyish towards the end, cross barred with blackish brown; throat and upper breast brown, varied with pale rufous and creamy white; lower breast creamy white, sparingly barred with dark brown; rest of the under parts with the legs white, tinged with rufous, and boldly barred with blackish brown; tarsus feathered in front and on the sides to the base of the toes; bill blackish horn, bluish at the base; feet yellow; iris brown. Culmen 1·4, wing 17·0, tail 9·5, tarsus 2·8 inch. Female similar, but rather larger. The young bird is darker, and has the throat, breast, and belly striped, not barred, the lower parts almost uniform dark brown.

Hab. Northern Europe and Asia, breeding from 56° N. lat. up to the extreme north in Europe, and Kamchatka in Asia; in winter and on passage visiting Great Britain, Central, and even Southern Europe, Southern Siberia and Japan; has occurred in Alaska.

Differs in habits from *B. vulgaris*, in that it is more a bird of the open, rocky country, and does not frequent woodlands. Its cry is the same but deeper and more melancholy in tone. It feeds on lemmings, and other small mammals, frogs, lizards, even insects, and also on young birds. Its nest is either in a tree standing in the open, placed on the ground, or on a cliff or rock, and is constructed of sticks lined with grass, and 3 to 4, sometimes 5 eggs are deposited, usually in May or June, but in a year when lemming were very numerous, fresh eggs were taken in Norway as late as the 9th September. These resemble the eggs of *B. vulgaris*, but are often more richly coloured, and measure about 2·25 by 1·75.

728. Himalayan Rough-legged Buzzard.

ARCHIBUTEO HEMIPTILOPUS.

Archibuteo hemiptilopus, Blyth, J.A.S.B. xv. p. 1 (1846); Blanf. F. Brit. Ind. Birds, iii. p. 395; *A. strophiatus*; Hodgs. in Gray's Zool. Misc. p. 81 (1844 descr. nullâ); Gray Cat. M. &c. Coll. Hodgs. p. 39 (1846, descr. nullâ); Sharpe, Cat. B. Br. Mus. i. p. 199 pl. vii. fig. 2; Berezovski and Bianchi, Ptitz. Gan-su, p. 32.

♂ *ad.* (Nepal). Upper parts brown, the feathers on the nape and upper back margined with rufous, the base of the nuchal feathers white; upper tail-coverts with rufous or buff bars and tips; tail above brown, tinged with rufous, below whitish, with dark bars; under parts white, marked with brown on the throat and breast; flanks and thigh feathers brown; bill dusky horn, the base of the mandible laterally yellowish; toes and naked part of tarsus livid waxy. Culmen 1·9, wing 19·75, tail 11·0, tarsus 3·45 inch.

Hab. Sikhim, Nepal, and Kulu; Shanghai in China; Ordos; south-west and south-east Kan-su, and the Amdos plateau; Tibet.

I find nothing on record respecting the habits or nidification of the present species. Like some of the Buzzards it appears to be subject to partial melanism.

HIERAETUS, Kaup, 1844.

729. Booted Eagle.

HIERAETUS PENNATUS.

Hieraetus pennatus (Gould), Syst. Nat. i. p. 272 (1788); (Naum.), xiii. p. 58, Taf. 343; (Gould), B. of E. i. pl. 9; (Dresser), v. p. 481, pls. 336, 337, 351, fig. 2; (Sharpe), Cat. B. Br. Mus. i. p. 253; Blanf. F. Brit. Ind. Birds, iii. p. 344; (Tacz.) F. O. Sib. O. p. 25, *H. minutus* (Brehm), Vög. Deutschl. p. 29, Taf. 2, fig. 2 (1831).

Aigle botté, French; *Aguia pequena*, Portug.; *Aguilucho*, *Aguila calzada*, Span.; *Aquila minore*, Ital.; *Zwergadler*, German.

♂ *ad.* (Spain). Forehead and lores white; head and neck warm sandy isabelline, streaked with brown; upper parts dark earth-brown, the scapulars and wing-coverts varied with sandy grey; quills dark brown, secondaries tipped with whitish brown; tail dark brown, tipped with pale isabelline, the outer feathers with obsolete darker bars; under parts white, the breast streaked with reddish brown, flanks also faintly striped; legs feathered to the toes; bill bluish at the base, black at the tip; cere and feet wax yellow; iris light hazel. Culmen 1·5, wing 14·0, tail 8·5, tarsus 2·6 inch. Female similar but larger. This Eagle is subject to considerable variation in both sexes, some being darker and more rufous, others again blackish brown, and others again have a white shoulder patch more or less developed. Young birds are generally more rufous than the adult.

Hab. Southern Europe, rarer in Central Europe, commoner in the south-east and south-west; Africa south to the Cape; Asia Minor, Central Asia, India, Ceylon, and Burma; of accidental occurrence in Dauria.

Frequents the woodlands and in its general habits somewhat resembles the Buzzards but is more active and predacious. It feeds on small mammals and birds, and is graceful and elegant on the wing, and not a shy bird. Its cry is a clear *ke, ke, ke.* It selects a high deciduous tree for its nest, constructing it of sticks with fresh green leaves or fresh pine-twigs for a lining. The eggs, usually two in number, are deposited late in April or in May, and are white tinged with greenish, rarely faintly marked with rufous, and are rather more coarse in grain of shell than those of the Goshawk; in size they average about 2·21 by 1·79.

730. BONELLI'S EAGLE.

HIERAETUS FASCIATUS.

Hieraetus fasciatus (Vieill.), Mém. Linn. Soc. Paris, p. 152 (1822); (Sharpe), Cat. B. Br. Mus. i. p. 250; (Dresser), v. p. 575, pls. 351, fig. 1, 352, 353; Blanf. F. Brit. Ind. Birds, iii. p. 342; *H. bonellii* (Temm.) Pl. Col. i. pl. 288 (1824); Naum. xiii. p. 33, Taf. 341; Gould, B. of E. i. pl. 7.

Aigle à queue barrée, French; *Aguila perdicera*, Span.; *Aquila del Bonelli*, Ital.; *Habichts-Adler*, German; *Morangi*, Hindu.; *Agab*, Arab.; *Teir-Thum*, Moor.

♂ *ad.* (Morocco). Upper parts dark brown, the feathers on the head and back white on the basal portion; dorsal feathers to some extent, scapulars, and wing-coverts narrowly, and those on the head and nape more broadly margined with light brown; quills deep brown, mottled with white on the basal part of the inner web; middle tail feathers brownish grey, the rest grey on the inner web, all with six or seven cross bars, and a broad subterminal band of blackish; under parts white, striped with blackish brown, the abdomen, thighs, and legs washed with warm buff; legs feathered to the toes; bill dull bluish at the base, otherwise black; cere and feet yellow; iris orange-brown. Culmen 2·1, wing 18·6, tail 11·6, tarsus 3·8 inch. Female similar but larger. The young bird has the upper parts umber brown, and the under parts dull reddish, striped with blackish.

Hab. Southern Europe; Africa south to Damaraland, commoner in the west than in the east; Arabia; Asia Minor, and Asia east to India.

Resembles the Goshawk more than the true Eagles, stronger and swifter on the wing, its flight somewhat resembling that of the Goshawk. It is essentially a clean feeder, disdaining carrion, and preying on water-fowl, rabbits, and birds of various kinds as large as the Little Bustard. Its nest is usually placed on the shelf or in a fissure of a cliff, and is constructed of sticks and boughs with a lining of fresh green twigs and leaves, and in February or March two eggs are deposited which are white with a faint blue greenish tinge sparingly marked with rusty red, somewhat smooth in texture of shell and in size averaging 2·65 by 2·02.

AQUILA, Briss., 1760.

731. GREATER SPOTTED EAGLE.

AQUILA MACULATA.

Aquila maculata (Gmel.), Syst. Nat. i. p. 258 (1788); Blanf. F. Brit. Ind. Birds, iii. p. 340; Saunders, p. 325; *A. nævia*, Gmel.? (Naum.), i. p. 217, Taf. 10, 11; Gould, B. of E. i. pl. 8; id. B. of Gt. Brit. i. pl. 3; Hewitson, i. p. 18, pl. 5; Newton, i. p. 20; Lilford, i. p. 3, pls. 3, 4, 5; *A. clanga*, Pall. Zoogr. R.A. i. p. 351 (1811); Naum. xiii. pls. 342, 346; Dresser, v. p. 499, pl. 339; Sharpe, Cat. B. Br. Mus. i. p. 248; Tacz. F. O. Sib. O. p. 22.

Aigle criard, French; *Schreiadler*, German; *Större-Skrikörn* Swed.; *Podorlik bolschoi*, Russ.; *Kaljanga*, Hindu.

♂ *ad.* (India). Entire plumage blackish brown, the mantle with a metallic purplish gloss; quills blackish; tail unbarred, the middle feathers tinged with grey; upper and under tail-coverts marked with white; bill dark horn; cere and feet yellow; iris brown. Culmen 2·35, wing 20·2, tail 11·0, tarsus 4·45 inch. Female similar, but larger. The young bird differs in being profusely spotted with greyish or brownish buff, the scapulars and larger coverts having large ovate spots, the lesser coverts smaller drop-shaped spots; secondaries broadly tipped with greyish; feathers on the rump and upper tail-coverts with the terminal portion brownish buff; under parts deep brown, striped with tawny brown; tarsal feathers dark brown, marked with creamy white; under tail-coverts creamy buff.

Hab. Central and Southern Europe, straying occasionally to Northern Europe and Great Britain; Africa, south to Kordofan and Abyssinia; Asia, east throughout India and Northern Burma; South Eastern Siberia as a rare straggler.

In habits this is a heavy somewhat sluggish bird frequenting open places as well as wooded tracts and damp marshy localities. It feeds on frogs, reptiles, large insects, fish, &c., and does not disdain carrion. Its note is a yelping cry *jeb, jeb, jeb.* Its nest which is constructed of sticks and dry branches intermixed with grass and leaves, is usually placed on a tree, sometimes however on a high bush, and in April or May two eggs are deposited which are white, somewhat sparingly marked with violet grey shell-markings and dark red surface-spots, and in size average about 2·65 by 2·33.

Aquila fulvescens Gray (*Aq. boecki* von Homeyer) is a pale variety of the present species (cf. Rothschild, Bull. B.O. Club. x. p. 51.) and not a distinct species.

732. LESSER SPOTTED EAGLE.

AQUILA POMARINA.

Aquila pomarina Brehm, Vög. Deutschl. p. 27 (1831); Dresser, v. p. 491, pl. 338; *A. maculata*, Sharpe, Cat. B. Br. Mus. p. 246 (1874, nec. Gmel.); *A. rufonuchalis*; Brooks, Stray Feathers, iv. p. 269 (1875).

Kleiner Schreiadler, German; *Mindre Skrikörn*, Swed; *Podorlik Malaya*, Russ.

♂ *ad.* (Pomerania). Differs from *A. maculata* in being smaller, the plumage earth-brown, with the tips of the feathers somewhat paler, the crown and nape warm creamy brown, the tail darker brown, the outer feathers tipped with dark grey and with obsolete light bars; tarsal feathers dull brown and light brown intermixed. Culmen 1·8, wing 17·7, tail 9·5, tarsus 3·8 inch. The young bird is brown, with a chocolate tinge and much less spotted than *A. maculata*; crown and hind-neck dotted with small ochreous rufescent spots, the nape with a large ochreous rufous patch; back and lesser wing-coverts dotted with small spots; secondaries tipped with greyish, the inner ones with large terminal irregularly ovate greyish spots; tail blackish brown, washed with grey and tipped with ashy grey; under parts striped with rufescent ochreous; tarsi sparsely spotted with creamy white; under tail-coverts creamy ochreous.

Hab. Eastern Europe, of rare occurrence in Scandinavia and in west-central Europe; Asia Minor and Syria on passage, ranging south in East Africa to Nubia in winter.

In habits it much resembles the Buzzards and like them is somewhat heavy and sluggish. It feeds to a large extent on frogs, and hence is often found near water, also on reptiles of various kinds, small mammals, and like its larger ally does not hesitate to feed on carrion when obtainable. Its nest which resembles that of the Common Buzzard is placed on a tree, but it occasionally makes use of the deserted nest of some other bird of prey. The eggs, two in number, are white, usually marked with pale violet grey shell-spots or blotches, and generally boldly blotched with dark red surface-markings and in size average about 2·49 by 1·97.

733. STEPPE EAGLE.

AQUILA NIPALENSIS.

Aquila nipalensis Hodgs. As. Res. xviii. part 2, p. 13, pl. i. (1832); Dresser, v. p. 507, pl. 340; *A. bifasciata*, J. E. Gray, Ill. Ind. Zool. i. pl. 17 (1830-34 nec. Brehm); Blanf. F. Brit. Ind. Birds, iii. p. 336; *A. orientalis*, Cab. J. f. O. 1854, p. 369; *A. amurensis*, Swinh. P.Z.S. 1871, p. 338; Tacz. F. O. Sib. O. p. 201; *A. mogilnik*, Sharpe, Cat. B. Br. Mus. i. p. 240 (1874 nec. Gmel.).

Steppen Adler, German; *Podorlik*, Russ.; *Karagush*, Bashkir.

♂ *ad.* (S. Russia). Upper parts dull earth-brown, darker on the head, scapulars and inner secondaries paler on the nape; quills and larger scapulars blackish brown; tail blackish brown, narrowly tipped with light brown, and with obsoletely marbled ashy grey bars; under parts dull earth-brown, tinged with rufous on the lower abdomen; bill bluish horn; cere, gape, and feet pale yellow; iris brown. Culmen 2·4, wing 20·5, tail 10·7, tarsus 3·7 inch. Female similar but larger. The young bird is dark earth-brown, with a faint purplish tinge above and below, has two conspicuous rufous ochreous wing-bars, the upper tail-coverts bright ochreous fawn, and the tail is broadly tipped with dull rufescent ochreous. From the Spotted Eagles this species is readily distinguishable in having a vertical and not a round nostril.

Hab. Eastern and South-eastern Europe; North-east Africa; Asia east to South Eastern Siberia; Mongolia and China; in winter visiting Northern India, Assam, and Burma.

In habits this is a heavy bird, frequenting the Steppes and open country and feeding on small mammals, reptiles, and carrion, sometimes capturing small birds. Its nest, which is invariably placed on the ground, frequently on a low mound, is constructed of twigs and boughs lined with grass, plant-stems, or wool, and the eggs 2, rarely 3 in number, are usually deposited in May, and are white with violet grey shell-markings and deep red surface-spots and blotches, and are as a rule not richly marked though sometimes they are as well and boldly marked as those of *A. pomarina.* In size they average 2·66 by 2·35.

734. TAWNY EAGLE.

AQUILA RAPAX.

Aquila rapax (Temm.), Pl. Col. i. livr. 76, pl. 445 (1828); Blanf. Geol. and Zool. Abyss. p. 295; Dresser, v. p. 513, pl. 341; Sharpe, Cat. B. Br. Mus. p. 242; *A. nævioides* (Cuv.), Règne Anim. i. p. 326 (1829); *A. albicans*, Rüpp. Neue Wirbelth., p. 34, pl. 13 (1835); von Erlanger J. f. O. 1898 Taf. vii.

Sagr el arneb, Arabic; *Chok, Coo Vogel,* in S. Africa.

♀ *ad.* (Africa). Head, neck, back, and rump creamy ochreous, sparingly marked with deep brown; scapulars and wing-coverts deep brown, with a purplish gloss and blotched with pale ochreous brown; quills blackish brown, secondaries with obsolete greyish bars on the inner web; tail deep brown, tinged with grey, the middle feathers obsoletely barred; under parts warm creamy ochreous, the throat, flanks, and abdomen broadly striped with warm brown; bill horn-blue; cere and feet yellow; iris brown. Culmen 2·5, wing 20·0, tail 10·0, tarsus 3·6 inch. The male is similar but smaller. The adult bird varies from the above to warm rufous brown above and below, the tail and wings blackish brown, and the young bird is pale brownish isabelline, but slightly striated, the quills and tail deep blackish brown, the latter tipped with fulvous.

Hab. Africa generally, south to the Cape Colony; Turkey and Palestine; of doubtful occurrence in south-western Europe.

In habits it differs but little from its allies and is a somewhat heavy bird, preferring carrion, frogs, fish, and even worms, to hunting after larger birds and mammals, but it will capture hares and rabbits, and often robs the sportsman of wounded game. Its call-note is (*fide* von Erlanger) *ichtiöh, ichtiöh.* Its nest is a large heavy structure of boughs, twigs, and dry grass, and is placed on a tree. The eggs, which are deposited in April or May, in Abyssinia in June or August, and on the Blue Nile in January, are white, more or less richly spotted and blotched with pale purplish red and deep rufous and measure about 2·81 by 2·22.

There are two forms of this eagle, one tawny, and the other (*Aq. albicans*) pale clay ochreous, but intermediate specimens occur.

735. Imperial Eagle.

AQUILA HELIACA.

Aquila heliaca, Savigny. Obs. Ois. de l'Égypte, p. 82, pl. xii. (1809); Gould, B. of E. i. pl. 5 ; Sharpe, Cat. B. Br. Mus. i. p. 238 ; Tacz. F. O. Sib. O. p. 17 ; Blanf. F. Brit. Ind. Birds, iii. p. 334 ; *A. imperialis* (Bechst.) Orn. Taschenb. p. 553 (1812) ; (Naum.) i. p. 201, Taf. 6, 7 ; *A. crassipes*, Hodgs. in Gray's Zool. Misc. p. 81 (1844) ; *A. mogilnik* (Gmel.) Nov. Com. Petrop. xv. p. 445 (1771) ? ; Dresser, v. p. 521, pls. 343, 344.

Aigle Impérial, French; *Kaiseradler*, German; *Aquila imperiale*, Ital.; *Mogilnik*, *Karagousch*, Russ.; *Akab*, *Urga*, Persian; *Iumiz*, Hindu.; *Frus*, Bengal.

♂ *ad.* (Bulgaria). Head and neck above dull yellowish isabelline, the forehead marked with dark brown, the nape tinged with rufous; rest of the plumage blackish brown, some of the scapulars pure white; tail dark grey, with a broad terminal blackish brown band, and finally tipped with light brown; under tail-coverts light brown; bill bluish, darker at the tip; cere and feet pale yellow; iris brownish yellow. Culmen 2·85, wing 23·5, tail 11·6, tarsus, 3·9 inch. Female similar but larger. The young bird is brownish yellow, striped with dark earth-brown; wings and tail dark brown, the latter tipped with light brown; secondaries tipped with yellowish white; chin and throat unstriped. Between this plumage and the adult all stages are to be met with.

Hab. South-eastern Europe; Asia Minor and Palestine; east Africa south to Nubia and Abyssinia; Asia east to south-eastern Siberia, Mongolia, and China; in India no further east than Bengal (Furreedpore).

In habits this Eagle is a heavy and sluggish bird, and resembles a Buzzard more than any nearer allied species.

It frequents the plains and steppes, where it feeds on small mammals and birds, frogs, lizards, and carrion. Its nest, which is placed in a tree is a heavy structure of boughs and sticks, lined with twigs, grass, wool, or other soft material, or with green leaves, and in April or May 2 eggs are deposited, which are dull white somewhat sparingly clouded with pale purplish red, and blotched with pale rufous, and average in size 2·95 by 2·28.

I still believe that Gmelin's *Falco mogilnik* is referable to this species, but as ornithologists hold such different views on this subject I have deemed it advisable to use Savigny's name *heliaca* about which there can be no doubt.

736. WHITE-SHOULDERED EAGLE.

AQUILA ADALBERTI.

Aquila adalberti L. Brehm, Ber. Ver. Deutsch. Orn. Gesellsch. xiii. Beitr. vii. p. 55 (1860); Dresser, v. p. 517, pls. 342, 343; Sharpe, Cat. B. Br. Mus. p. 239; *A. leucolena,* Dresser, P.Z.S. 1872, p. 864.

Aguila real, Aguila imperial, Span.; *Aguia,* Portug.

♀ *ad.* (Spain). Differs from *A. heliaca* in having the forehead and crown umber-brown, the rest of the crown and nape light sandy brown, the whole edge of the wings with a broad band of white, the scapulars dark brown, and the sides of the face and of the neck light sandy brown, washed with rufous. Culmen 3·1, wing 24·4, tail 13·8, tarsus 4·15 inch. Male similar but smaller. The young bird differs from that of *A. heliaca* in being pale sandy isabelline, tinged with rufous and unstriped.

Hab. The Iberian peninsula, and north-west Africa.

In habits and nidification it does not differ from *A. heliaca* and its eggs are also similar to those of that species.

737. GOLDEN EAGLE.

AQUILA CHRYSAETUS.

Aquila chrysaetus (Linn.), Syst. Nat. i. p. 125 (1766); Naum. xiii. Taf. 339; Hewitson, i. p. 8, pl. iii. pl. iv. fig. 1; Gould, B. of E. i. pl. 6; id. B. of Gt. Brit. i. pl. 2; Newton, i. p. 11; id. Ootheca Wolleyana, pp. 8–43, pls. ii.–iv.; Dresser, v. p. 533, pl. 345; Sharpe, Cat. B. Br. Mus. p. 235; Tacz. F. O. Sib. O. p. 10; Blanf. F. Brit. Ind. Birds, iii. p. 333; Saunders, p. 327; Lilford, i. p. 3, pl. 3; Ridgway, Man. N. Am. B. p. 242; *A. fulva* (Linn.), Syst. Nat. i. p. 125 (1766); (Naum.) i. p. 208, Taf. 8, 9; *A. melanaetos* (Gmel.), Syst. Nat. i. p. 254 (1788); *A. canadensis* (Gmel.), tom. cit. p. 256; *A. barthelemyi,* Jaub. Rev. and Mag. Zool. 1852 p. 545.

Aigle royal, French; *Aguia real,* Portug.; *Aguila real,* Spain. *Aquila reale,* Ital.; *Steinadler, Goldadler,* German;

Steen Arend, Dutch: *Kongeörn, Stenörn*, Dan. and Norweg.: *Kungsörn*, Swed.; *Maa-kotka, Kokko*, Finn.: *Koaskim*, Lapp.; *Bjerkut, Cholsan*, Russ.; *Agâob-kakala*, Arab.; *Ogab*, Moor.; *Muriari*, Hindu.; *Inu-washi*, Jap.

♂ *ad.* (N. Russia). Forehead and cheeks deep brown; crown, nape, and hind-neck rufous buff; upper parts deep brown, with a faint purplish gloss, many of the feathers with lighter tips; quills blackish brown; tail blackish brown, on the basal portion irregularly barred with dark grey; under parts blackish brown; the feathers on the tarsus rufous creamy buff; bill dark horn; cere and feet yellow; iris rich hazel brown. Culmen 2·8, wing 23·6, tail 13·5, tarsus 4·2 inch. The female is similar but larger. The young bird has the upper parts more uniformly dark; crown and nape dark brown, the feathers with greyish buff tips; lower back and rump varied with white; the basal two-thirds of the tail white, sparingly marbled with pale brown; tarsal feathers dull white, sparingly streaked and marbled with brown.

Hab. The mountainous portions of Europe generally, north into Lapland; British Islands; North Africa; Asia east to China, north to Dauria, south to the Himalayas; North America from the Arctic regions south to the Hudson river and New Mexico.

Frequents the mountains in preference to the plains, and is a more powerful bird than *A. heliaca*, and though it will feed on carrion when an opportunity occurs, yet its usual prey consists of hares, rabbits, lambs, fawns, and birds, also rats and other small mammals. On the wing it is graceful and powerful and soars in circles with ease in search of its prey. Its cry is a loud yelp uttered several times in succession. It nests on rocks or trees making a bulky nest of boughs and sticks lined with fern, moss, grass, wool, or any suitable soft material, and in March or April deposits 2, sometimes 3, and but rarely 4 white eggs, sometimes unmarked but usually more or less richly spotted and blotched with violet-grey shell-markings, and rich dark surface-spots and blotches, and in size average 2·89 by 2·41. All the eggs I have received from near Archangel are pure white.

HALIAETUS, Savigny, 1810.

738. PALLAS'S SEA-EAGLE.

HALIAETUS LEUCORYPHUS.

Haliaetus leucoryphus (Pall.) Reis. Russ. Reichs i. p. 454 (1771); Dresser, v. p. 545, pl. 346; Sharpe, Cat. B. Br. Mus. i. p. 308; Blanf. F. Brit. Ind. Birds, iii. p. 366; Tacz. F. O. Sib. O. p. 43; *H. macei* (Temm.), Pl. Col. i. pls. 8, 223 (1824).

Bieloklovöi-orlan, Russ.; *Machurang,* Hindu.

♂ *ad.* (S. Russia). Forehead, sides of head and neck, chin, and throat pale yellowish white; crown, nape, and hind-neck warm rufous isabelline, or rufescent ochreous; rest of upper parts umber-brown; tail dark brown, with a broad white cross band; under parts dark reddish brown; bill dark plumbeous; cere light plumbeous; tarsus nearly bare, dull white; feet dull white; iris greyish yellow. Culmen 2·7, wing 22·0, tail 11·7, tarsus 3·85 inch. Female similar but larger. The young bird has the upper parts nearly uniform brown, the head and neck dark fulvous brown, streaked with sandy brown; tail dark brown, with an ashy tinge; under parts lighter fulvous-brown, some of the breast-feathers with pale margins.

Hab. European Russia, not ranging far north; Turkey, Asia Minor, and Central Asia, east to southern Siberia, Mongolia, and northern China; northern India and Burma.

Is essentially a frequenter of rivers, marshes, tidal creeks, and lakes, and feeds on fish, which it captures near the surface of the water, water-fowl, and snakes, frogs, etc, but its chief food consists of fish. Its cry is a shrill half croak, half scream, somewhat harsh in tone. It places its nest on a lofty tree, constructing it of sticks and boughs, lining it with twigs and green leaves, rushes and straw, and from December to January (in India) 2 or 3, seldom 4 eggs are deposited, which are white and in size measure about 2·81 by 2·16.

739. SEA-EAGLE.

HALIAETUS ALBICILLA.

Haliaetus albicilla (Linn.), Syst. Nat. i. p. 123 (1766); (Naum.), i. p. 224, Taf. 12, 13, 14; Hewitson, i. p. 15, pl. iv. fig. 2; Gould, B. of E. i. pl. 10; id. B. of Gt. Brit. i. pl. 4; Newton, i. p. 25; id. Ootheca Wolleyana, pp. 45–58; Dresser, v. p. 551, pls. 347, 348; Sharpe, Cat. B. Br. Mus. i. p. 302; Tacz. F. O. Sib. O. p. 29; Blanf. F. Brit. Ind. Birds, iii. p. 369; Ridgway, p. 243; Saunders, p. 327; Lilford, i. p. 8, pl. 6.

Pygargue à queue blanche, French; *Aguila pigargo,* Span.; *Aquila di Mare,* Ital.; *Seeadler,* German; *Zee-arend,* Dutch; *Orn,* Icel.; *Havörn,* Dan. and Norweg.; *Hafsörn,* Swed.; *Meri-kotka,* Finn.; *Bielochvost,* Russ.; *Ō-jiro-washi,* Jap.

♂ *ad.* (S. Russia). Head, upper neck, and throat creamy white, the base and shafts of the feathers dark brown; rest of the body and wings dark brown, marked here and there with brownish white; the quills blackish; tail nearly wedge-shape, dark brown at the extreme bases, otherwise white; bill and cere pale yellow, the former bluish at the tip; legs chiefly unfeathered, light yellow; iris straw yellow. Culmen 3·6, wing 26·5, tail 12·5, tarsus 4·2 inch. Female larger, and darker on the head and neck. The young bird has the entire plumage blackish brown, varied with fulvous, the tail dark brown; bill blackish; cere yellowish brown; legs and feet dull yellowish; iris brown.

Hab. Europe generally, north to south Greenland and Novaya Zemlya; North Africa; Asia Minor and Asia east to Japan, north to Kamchatka, south to N.W. India, Sind, and the Punjab; China, Manchuria, and Corea.

As its name implies it is chiefly an inhabitant of the sea coast, large lakes, and rivers, but in some parts is often found far inland. Though large and powerful it seldom attacks any animal larger than a grouse, hare, or a lamb, but feeds principally on fish, carrion, rabbits, and wild fowl. Its cry is a clear shrill yelp, shriller than that of the Golden Eagle. The nest is a huge structure of sticks lined with moss and grass, and is placed on a cliff, a tree, or, when in a marsh, on the ground, and the eggs are laid in April or May in Europe, or earlier in the south-eastern portions, and in December and January in Egypt. These are two in number and uniform unspotted white, rather rough in texture of shell and measure about 2·82 by 2·30.

740. BALD EAGLE.

HALIAETUS LEUCOCEPHALUS.

Haliaetus leucocephalus (Linn.), Syst. Nat. i. p. 124 (1766); Wils. Am. Orn. iv. p. 89, pl. 36; Naum. xiii. Taf. 334, 335; Gould, B. of E. i. pl. 11; Aud. B. N. Am. i. p. 59, pl. 14; Ridgway, p. 243; Tacz. F. O. Sib. O. p. 34; Bendire Life Hist. N. Am. B. i. p. 274, pl. ix. fig. 7 (egg); *H.*] *washingtonii* (Aud.) Mag. Nat. Hist. i. p. 115 (1829).

♂ *ad.* (New Brunswick). Differs from *H. albicilla* in having the head, neck, tail-coverts, and tail pure white, the rest of the plumage blackish brown, many of the feathers with paler margins; bill, cere, legs, feet, and iris yellow. Culmen 2·20, wing 25·0, tail 13·2, tarsus 3·35 inch. Female similar but larger. The young bird is nearly uniform blackish brown, the feathers on the under parts with white bases, which show through here and there.

Hab. N. America, south to Florida and Mexico; the Commander Islands and Kamchatka.

In habits it resembles *H. albicilla* and like that bird feeds on small mammals, carrion, fish, and birds, and often robs the

Osprey of its finny prey. Its nest also resembles that of *H. albicilla* and is usually placed on a tree but sometimes also on a cliff or on the ground. Its eggs are also pure white, 2 in number, and are deposited from December to April according to latitude. They measure about 2·89 by 2·26, but eggs from southern latitudes are smaller than those from the high north.

741. KAMCHATKAN SEA-EAGLE.

HALIAETUS PELAGICUS.

Haliaetus pelagicus (Pall.), Zoogr. R. As. i. p. 343 and pl. (1811) ; Temm. and Schlegel, Faun. Jap. Aves, p. 11, pl. 4 ; Cassin. B. Calif. pp. 31, 110, pl. 6 ; David and Oust. Ois. Chine, p. 13 ; Tacz. F. O. Sib. O. p. 37 ; Sharpe, Cat. B. Br. Mus. p. 306 ; (Ridgway), p. 243.

Ō-washi, Jap.

♂ *ad.* General colour dark brown, with a slight greyish tinge, the forehead, lesser and median wing-coverts, rump, tail, tail-coverts, and thighs white ; nape and hind-neck greyish brown, with paler edges ; bill, cere, and feet rich yellow ; tarsus chiefly bare ; iris pale yellow. Culmen 2·49, wing 24·0, tail 14·0, tarsus 4·5 inch. Female similar but larger. The young bird is dull brown, on the head and under parts with paler streaks, the lower back, rump, and tail-coverts marked with white, and the tail white, mottled with brown ; thighs and vent feathers slightly mottled with white.

Hab. Kamchatka, eastern and south-eastern Siberia ; rare in the Commander Islands ; Mongolia ; North China ; Japan ; of accidental occurrence in the Aleutian Islands ?

In habits it is said to resemble *H. albicilla* and like that bird it feeds on fish and carrion. It places its nest, which is a heavy structure of boughs and sticks, lined with grass, on a tree, but also occasionally on a rock and in March, April, or May deposits 2 eggs, which resemble those of *H. albicilla* but are as a rule slightly larger.

742. COREAN SEA-EAGLE.

HALIAETUS BRANICKII.

Haliaetus branickii, Tacz. P.Z.S. 1888, p. 451 ; id. F. O. Sib. O. p. 42.

♂ *ad.* Differs from *H. pelagicus* in having only the tail and upper and under tail-coverts pure white, the rest of the plumage blackish brown, the feathers on the crown and neck with a fine central greyish line ; beak, cere, bare portion of tarsus and feet rich orange-yellow ; iris white with a yellowish tinge. Culmen 3·15, wing 21·62, tail 13·39, tarsus 3·42 inch.

Hab. Corea.

As yet but very little is known about this bird, and it has only been obtained in Corea. Nothing is on record respecting its habits or nidification. Dr. Puschkin described (Bull. B. O. Club, xi. p. 4, 1900) under the name *Thalassaëtus macrurus*, from Yakutsk, a Sea-Eagle closely allied to *H. branickii*, of which I have not seen a specimen and cannot therefore judge as to whether it is a good species.

CIRCAETUS, Vieill., 1816.

743. Short-toed Eagle.

CIRCAETUS GALLICUS.

Circaetus gallicus (Gmel.), Syst. Nat. i. p. 295 (1788); Gould, B. of E. i. pl. 13; Dresser, v. p. 563, pls. 349, 350; Sharpe, Cat. B. Br. Mus. i. p. 280; Blanf. F. Brit. Ind. Birds, iii. p. 355; *C. brachydactylus* (Wolf), Taschenb. deutsch. Vogelk. i. p. 21 (1810); Naum. i. p. 236, Taf. 15.

Aigle Jean le blanc, French; *Guincho da tainha*, Portug.; *Aguila parda*, *Aguila del huevo solo*, Span.; *Biancone*, Ital.; *Natternadler*, *Schlangenadler*, German; *Agarb abiad*, Arab.; *Sampmar*, Hindu.; *Sapmaril*, Beng,

♂ *ad.* (Italy). Upper parts dark earth-brown with a faint purplish gloss, some of the feathers with darker centres; quills dark brown on outer web and tips, white on inner web, barred on the secondaries; tail brown, with darker bars and tipped with white; lores, forehead, chin, and sides of head covered with long black bristles; under parts white, the throat and breast striped, the flanks sparingly barred with brown; under tail-coverts white; tarsi bare, covered with almost hexagonal scales, those on the feet smaller and rounder; beak blackish horn; cere yellowish flesh-colour; legs dirty flesh-colour; iris yellow. Culmen 2·05, wing 20·4, tail 11·4, tarsus 4·1 inch. Female similar but larger. The young bird has the wing-coverts with paler margins, the throat more marked with brown, the lower throat and breast almost uniform dark earth-brown, and the breast broadly barred with brown.

Hab. Southern Europe, rare in central Europe and only a straggler further north; Africa south to Kordofan and Senaar; Palestine and central Asia east to North China, and occurring throughout India.

In habits it has much in common with the Buzzards, and on the wing it is very Buzzard-like, but is readily distinguishable by its white under parts. It feeds on snakes, lizards, crabs, frogs, large insects, small mammals and weakly birds, and to some extent on fish. Its note is a plaintive, rather wild cry. It is a tree-breeder, but its nest has been found on the ground. The nest is constructed of sticks and twigs lined with coarse grass, and it lays, in April or May, a single egg which is roundish in shape, white with a faint greenish tinge, the shell rather rough and granulated, and measures about 2·65 by 2·19.

SPIZAETUS, Vieill., 1816.

744. Nepalese Hawk Eagle.

SPIZAETUS NEPALENSIS.

Spizaetus nepalensis (Hodgson), J.A.S.B. v. p. 229, pl. 7 (1836); Sharpe, Cat. B. Br. Mus. i. p. 267; Blanf. F. Brit. Ind. Birds, iii. p. 352; *S. orientalis*, Temm. and Schlegel, Faun. Jap. Aves, pl. 3 (1850).

Kanda-panthiong, Lepcha.; *Kuma-taka*, Jap.

♂ *ad.* (India). Crown and sides of head blackish; crest 3 to 4 inches long narrowly tipped with white; upper parts dark brown; quills with somewhat indistinct bars; rump and upper tail-coverts barred brown and white; tail greyish brown with blackish bands; throat white with a central blackish stripe; breast buffy white broadly striped with blackish brown; rest of under parts brown barred with white; bill black; cere hoary black; feet dull yellowish white; iris yellow; legs feathered to the base of the middle toe. Culmen 1·9, wing 17·0, tail 12·5, tarsus 4·2 inch. Female similar but rather larger. The young bird has the crown and sides of head warm isabelline, spotted and striped with blackish brown; rest of the upper parts earthy brown, some of the feathers with pale margins; tail earth-brown, whitish at the extreme base and with broad dark bars; entire under parts warm rufous buff with a few blackish brown short stripes on the breast.

Hab. The Himalayas from Kashmir to Bhután, visiting the plains of Northern India in the cold season; China; Mongolia; Japan.

This is a forest-haunting species, and preys on small mammals, pheasants, and other game birds. It breeds in the Himalayas, and in Japan, placing its nest, which is a bulky structure of sticks, on a tree, and from January to May the eggs, 2 in number, are deposited. These are greenish white, sparingly marked with pale purple and reddish brown and measure about 2·7 by 2·2.

ASTUR, Lacépède, 1801.

745. GOSHAWK.

ASTUR PALUMBARIUS.

Astur palumbarius (Linn.), Syst. Nat. i. p. 130 (1766); (Naum.) i. p. 249, Taf. 17, 18; Hewitson, i. p. 34, pl. xi; Gould, B. of E. i. pl. 17; id. B. of Gt. Brit. i. pl. 10; Newton, i. p. 83; id. Ootheca Wolleyana, i. p. 73; Dresser, v. p. 587, pl. 354; Sharpe, Cat. B. Br. Mus. i. p. 95; Blanf. F. Brit. Ind. Birds, iii. p. 397; Tacz. F. O. Sib. O. p. 98; Saunders, p. 331; Lilford, i. p. 59, pls. 28, 29.

Autour, French; *Açor*, Portug.; *Azor*, Span.; *Astore*, Ital.; *Hühnerhabicht*, German; *Havik*, Dutch; *Duehög*, Dan. and Norweg.; *Dufhök*, Swed.; *Koppelohaukka, Kyyhkyhaukka*, Finn.; *Yastrebutnyatnik*, Russ.; *L'Abli*, Arab.; *el-Boz*, Moor.; *Tartan*, Pers.; *Jarra* ♂, *Baz* ♀, Hindu.; *Ō-taka*, Jap.

♂ *ad.* (N. Russia). Upper parts dark ashy slate, blacker on the head, the nape marked with white; quills dark brown tinged with ashy, obsoletely barred on the outer web, mottled with greyish white on the inner web; tail ashy brown tipped with white, and with four dark brown bands; a line above and a long patch behind the eye white; under parts white, the throat indistinctly barred with grey and finely streaked with blackish; rest of under parts except the under tail-coverts barred with slate-grey; bill bluish horn; cere greenish yellow; leg yellow; iris orange-yellow. Culmen 1·4, wing 13·0, tail 10·0, tarsus 3·1 inch. Female similar but larger, somewhat browner above, and more broadly barred below. The young bird is warm brown above, the head and nape with broad light reddish brown, the back and wings with narrow yellowish white margins; quills and tail distinctly barred; under parts buffy white striped with dark brown.

Hab. Europe generally, north as far as the forest extends; of rare occurrence now in Great Britain; North Africa in winter; Asia generally, east to Japan, north to Kamchatka, south to the Himalayas, and northern China.

Is a bird of the forest and woodlands, and of the lowlands not occurring in the mountains. On the wing it is swift and active, and threads through the forest trees with ease, being able to overtake and capture pigeons as well as game birds. To poultry and game it is a veritable scourge. Its nest is placed on a tree, generally at a considerable altitude, and is constructed of sticks and twigs, lined with finer twigs, and sometimes garnished with fresh foliage. The eggs 3 to 4 in number are white with a faint blue-green tinge, occasionally faintly marked with colour, are laid in April or May, and measure about 2·43 by 1·80. Specimens from Asia, and especially from Kamchatka (*A. candidissimus*, Dyb.), are very pale and may almost be considered as a subspecies. In North America the Goshawk is replaced by *Astur atricapillus* (Wils.) which differs in having the under parts closely freckled, not barred or narrowly vermiculated with ashy brown. This species is said to have been once obtained in Scotland, and once in Ireland.

746. SHIKRA.

ASTUR BADIUS.

Astur badius (Gmel.), Syst. Nat. i. p. 280 (1788); Sharpe, Cat. B. Br. Mus. i. p. 109; (Dresser), ix. p. 273, pl. 693; Blanf. F. Brit. Ind. Birds, iii. p. 398; *A. dussumieri*, Temm. Pl. Col. i. pls. 308, 336 (1824); *A. cenchroides*, Severtz. Turk. Jevot. p. 113 (1873).

Kyrgui, Tekke; *Shikra* ♀ *Chipka* ♂, Hindu.; *Kurula-goya*, Cing.; *Thanc*, Burm.

♂ *ad.* (India). Upper parts ashy grey; quills blackish towards the tip; outer tail-feathers with blackish bars; sides of head tinged with rufous; chin whitish; under parts rusty red narrowly barred with white; bill dusky black; cere, legs, and iris yellow. Gape 0·7, wing 7·5, tail 6·3, tarsus 2·0 inch. Female similar but larger. The young bird is brown above, the feathers at first with rufous edges; conspicuous white bars on the head and nape; all the tail-feathers barred; under parts white with large elongate brown spots; usually a median brown stripe on the throat.

Hab. Transcaspia; Persia; Turkestan; the whole of India and Ceylon; Burma; Siam; Cambodia, and southern China.

Extremely active and courageous in its habits this Hawk will attack birds larger than itself. It inhabits the plains, as well as the hills up to an altitude of about 5000 feet, and is not to be found in the thick forests or in the desert. Its flight is steady and direct, but it sometimes soars and circles at a considerable altitude. Its note is a shrill two-note whistle or scream. It feeds on mice, insects, small reptiles, and birds, and will also take toll from the poultry yards. Its nest is a somewhat loose structure of small sticks, lined with fine roots, and is placed at a considerable altitude in a tree, and its eggs, usually 4, but occasionally 5 in number, are bluish white, very seldom faintly marked with colour, and in size average about 1·55 by 1·22.

747. Levant Sparrow-Hawk.

ASTUR BREVIPES.

Astur brevipes, Severtz. Bull. Soc. Imp. Nat. Mosc. xxxiii. p. 234, tab. i, ii. iii. (1850); (Dresser), v. p. 633, pls. 359, 360; Sharpe, Cat. B. Br. Mus. i. p. 111; (Seidensacher), Ver. Zool. Bot. Gesell. 1864, taf. i. (egg); *A. gurneyi* (Bree.), B. of Eur. iv. p. 185 (1863).

Basha, Pers.

♂ *ad.* (Macedonia). Differs from *A. badius* in being larger, in having the under parts much more broadly and boldly barred, and as a rule with darker brown and not rufous bars. Culmen 0·85, wing 8·9, tail 7·0, tarsus 2·15 inch. The female is not much larger than the male, whereas in *A. badius* the difference in size between the sexes is considerable.

Hab. South-eastern Europe; Greece; Southern Russia; Palestine; Asia Minor; Transcaspia; Persia.

This, the western representative of *A. badius*, differs but little from that bird in its habits and nidification. It frequents groves, gardens, and woods, and feeds on small mammals, birds, and large insects. Its nest resembles that of the Sparrow Hawk and is placed in a tree often tolerably high above the ground, and in May it lays 4, sometimes only 3, eggs which are greenish white when fresh, but soon fade. In size they average 1·57 by 1·25.

ACCIPITER, Briss., 1760.

748. Sparrow-Hawk.

ACCIPITER NISUS.

Accipiter nisus (Linn.), Syst. Nat. i. p. 130 (1766); (Naum.), i. p. 258, taf. 19, 20; Hewitson, i. p. 35, pl. xii; Gould, B. of Gt. Brit. i. pl. 11; Newton, i. p. 88; Dresser, v. p. 599, pls. 355 356, 357, 358; Sharpe, Cat. B. Br. Mus. i. p. 132; Blanf. F Brit. Ind. Birds, iii. p. 402; Saunders, p. 333; Lilford, i. p. 66, pls. 30, 31, 32, 33; *A. fringillarius* (Savigny), Desc. de l'Égypt. Ois. p. 270 (1808); Gould, B. of E. i. pl. 18; *A. pallens*, Stejn. Proc. U. S. Mus. xvi. p. 625 (1893); *A. granti*, Sharpe, Ann. and Mag. Nat. Hist. v. p. 483 (1890).

L. Épervier, French; *Gavião*, Portug.; *Gavilan*, Span.; *Sparviere*, Ital.; *Sperber*, German; *Sperwer*, Dutch; *Spurvehæg*, Dan. and Norweg.; *Sparfhök*, Swed.; *Varpuishaukka*, *Nuoli-*

haukka, Finn.; *Jastreb-perepelatnik*, Russ.; *Tholéa*, Arab.; *Basha*, Pers.; *Basha* ♀, *Bashin* ♂, Hindu.; *Haitaka, Konori*, Jap.

♂ *ad.* (England). Upper parts dark slate-grey, the nape marked with white and a narrow superciliary stripe white; quills and tail greyish brown with dark transverse bands; under parts rufous white, sometimes rich rufous, barred with rufous brown; bill dark horn-blue; cere, legs, and feet yellow; iris orange. Culmen 0·65, wing 7·9, tail 6·5, tarsus 2·15 inch. The female is considerably larger than the male, viz. culmen 0·8, wing 9·2, tail 7·2, tarsus 2·4 inch, and the old bird has the under parts white, but little tinged with rufous except on the flanks, and barred with brown. The young bird is dark brown above with rusty margins to the feathers, the quills and tail with dark bars; below dull white streaked and to some extent irregularly barred with dark brown. This species is however subject to considerable variation in colour and markings.

Hab. Europe generally, north to the Arctic Circle; North Africa in winter, south to Kordofan and Sennaar; Asia Minor, Palestine, and Asia generally, north to Kamchatka, east to Japan, and south to India, Corea, and China.

Extremely bold, swift, active on the wing and fierce, the Sparrow Hawk is not only a terror to small birds, but a sore pest to the game preserver and poultry breeder. It frequents not only woodlands and plains, but may also be met with in the mountains. It feeds chiefly on birds, and will attack a bird as large as itself, but its chief food consists of small and young birds, Wood Pigeons, young Rabbits, Leverets, etc. Its alarm note is a tolerably shrill *kirk, kirk, kirk*, and in the breeding season it utters a soft *gu, gu, gu*. It usually builds its own nest, a somewhat flat structure of sticks lined with finer twigs, placed on a tree often at a considerable altitude; it will, however, occasionally make use of a deserted crow's nest. The eggs, 4 to 5, sometimes 6 or 7, in number, are deposited in May, and are white tinged with pale green or blue, more or less blotched and marked with chestnut-red, reddish brown, or dark brown, and in size average 1·55 by 1·27.

749. BESRA SPARROW-HAWK.

ACCIPITER VIRGATUS.

Accipiter virgatus (Temm.), Pl. Col. i. pl. 109 (1823); Sharpe, Cat. B. Br. Mus. i. p. 150; Blanf. F. Brit. Ind. Birds, iii. p. 404; Tacz. F. O. Sib. O. p. 110; *A. gularis* (Temm. and Schlegel), Faun. Jap. Aves, p. 5, pl. 2 (1850); *A. stevensoni*, Gurney, Ibis, 1863, p. 447, pl. xi.

Besra ♀, *Dhoti* ♂, Hindu.; *Ukissa*, Cing.; *Tsume*, Jap.

♂ *ad.* (Japan). Upper parts dark slaty brown, the sides of the head pale greyish brown washed with rufous; tail and quills dark banded; nape-feathers and scapulars white at the base; throat white; under parts pale rusty red slightly barred with white, vent and under tail-coverts white; bill lead-grey, blackish at the tip; cere pale lemon-yellow; legs and feet yellow; iris bright yellow or orange. Culmen 0·72, wing 6·3, tail 5·3, tarsus 2·1 inch. Female larger (wing 7·8, tail 6·4); upper parts dark brown tinged with grey, the head blackish brown; tail pale ashy brown with broad blackish bands; under parts white broadly barred with rufous brown; throat white with a broad dark median stripe.

Hab. The Himalayas and the forests of India and Ceylon, north to the southern Baikal district and Dauria, east to China and Japan, south to the Indo-Malayan islands.

Inhabits the forests, and is a bold courageous bird, being therefore held in high esteem by Indian falconers. It feeds on small birds, and also to some extent on lizards and insects. Its nest is placed in a tree and is constructed of sticks without any lining, and the eggs, 4 in number, are laid in May, and are white spotted and blotched with dark umber-brown and measure about 1·54 by 1·19.

MELIERAX, Gray, 1840.

750. MANY-BANDED HAWK.

MELIERAX POLYZONUS.

Melierax polyzonus (Rüpp.), Neue Wirbelth. p. 36, taf. 15 (1835); Drake, Ibis, 1869, p. 153; Sharpe, Cat. B. Br. Mus. i. p. 88.

Saqr Schikl, Arab.; *Hatkaadak*, Somali.

♂ *ad.* (N. Africa). Upper parts slate-grey, the sides of the head darker; larger wing-coverts and outer secondaries freckled with white; primaries blackish, washed with ashy grey; upper tail-coverts white barred with slate-grey; tail blackish, but white at the extreme base and tip, the outermost feathers banded with white; throat and breast ash-grey, the rest of the under parts white narrowly barred with ash-grey; bill horn-black, the base, cere, and legs vermilion; iris pale umber-brown. Culmen 1·4, wing 12·5, tail 9·0, tarsus 3·5 inch. Female similar but rather larger. The young bird is dull brown above, the feathers with fulvous or rusty margins; the throat whitish finely streaked with brown; rest of the under parts, upper and under tail-coverts white barred with rusty brown, the tail greyish brown banded with dark smoky brown; bill blackish horn, at the base bluish; cere olive-green; legs yellowish red, iris dull brown.

Hab. Northern and north central Africa, north to Arabia and Morocco; an accidental straggler south to Damaraland.

Frequents woods, groves in the plains, gardens, and is not unfrequently seen near villages. Throughout its range it is a resident, is generally seen in pairs, and is by no means a shy bird. It feeds chiefly on grasshoppers, lizards, frogs, and small snakes, less frequently on mice or birds. Its call-note is a peculiar melodious whistle, which is generally to be heard in the pairing season.

Its nest is built of dry sticks and is placed high up in a tree, and its eggs, which are laid from August to October, are said to be bluish white.

Melierax gabar is said to have occurred in southern Europe, but I can find no authentic instance of its appearance there.

MILVUS, Cuv., 1800.

751. THE KITE.

MILVUS ICTINUS.

Milvus ictinus, Savigny, Syst. Ois. d'Égypte, p. 28 (1810); Newton, i. p. 92; Dresser, v. p. 643, pl. 361; Sharpe, Cat. B. Br. Mus. i. p. 319; Saunders, p. 335; *Falco milvus*, Linn. Syst. Nat. i. p. 126 (1766); Naum. i. p. 333, taf. 31; *M. regalis*, Vieill. Faun. Franç. Oiseaux, p. 14, pl. 7, fig. 1 (1821); Gould, B. of Gt. Brit. i. pl. 22; Lilford, p. 25, pl. 13; *M. vulgaris*, Flem. Brit. Anim. p. 51 (1828); Hewitson, i. p. 36, pl. xiii.; Gould, B. of E. i. pl. 28.

Milan Royal, French; *Milhafre, Milano*, Portug.; *Milano real*, Span.; *Nibbio*, Ital.; *Roter Milan*, German; *Wouw*, Dutch; *Glente*, Dan. and Norweg.; *Glada*, Swed.; *Kokkolintu*, Finn.; *Korschun canya*, Russ.; *Siwâna*, Moor.; *Hadayia hamara*, Arab.

♂ *ad.* (N. Germany). Head and neck greyish white with ashy brown shaft-streaks; upper parts dark brown broadly margined with rufous; larger quills blackish, some of the inner secondaries with white margins on the inner web; upper tail-coverts rufous; tail deeply forked, reddish brown, with dark bars on the inner webs; under parts reddish brown striped with dark brown, the under tail-coverts reddish white; beak blackish horn, bluish at the base; cere and legs yellow; iris yellowish white. Culmen 1·9, wing 19·0, tail 14·4, tarsus 2·3 inch. Female similar but rather paler and larger. The young bird has the crown blackish brown marked with white, the upper parts more rufous, the tail browner and with obsolete dark bars, the under parts pale rusty red with yellowish blotches, and the lower abdomen and under tail-coverts yellowish white.

Hab. Europe generally, rarer in the east, north to southern Norway and Sweden; rare in Finland and in Great Britain; Canaries, Madeira, and north-west Africa; southern Russia and Palestine.

Heavy and somewhat sluggish in its habits, it is strong though not swift on the wing, and is often seen circling high up in the air. During the breeding season it frequents woods and groves, but at other times affects the open country. It feeds on young birds, small mammals, young hares and rabbits, lizards, snakes, frogs and large insects. As a rule it is a silent bird, but its cry is a clear *heah, he, he, heah.* Its nest is placed high up in a tree and is large, rather flat, constructed of sticks and lined with wool, straw, moss, rags, or any soft material. The eggs, 3, seldom 4, in number, are deposited in April or May, and are white, with a few violet grey shell-markings and reddish-brown surface spots and blotches, and measure about 2·42 by 1·77.

752. BLACK KITE.

MILVUS MIGRANS.

Milvus migrans (Bodd), Tabl. Pl. Enl. p. 28 (1783); Gould, B. of Gt. Brit. i. pl. 23; Newton, i. p. 97; Dresser, v. p. 651, pl. 362; Saunders, p. 337; Lilford, i. p. 27, pl. 14; Blanf. F. Brit. Ind. Birds, iii. p. 378; *M. ater* (Gmel.), Syst. Nat. i. p. 262 (1788); Naum. i. p. 340, taf. 31, fig. 2; *M. niger*, Bp. Comp. List, p. 4 (1838); *M. korschun*, Sharpe, Cat. B. Br. Mus. i. p. 322 (nec. Gmel.)

Milan noir, French; *Milano negro*, Span.; *Nibbio nero*, Ital.; *Schwarzer Milan*, German; *Sort Glente*, Dan.; *Brun Glada*, Swed.; *Korschun*, Russ.; *Hadáya*, Arab.

♂ *ad.* (Spain). Crown, throat, sides of head, and nape white, the forehead narrowly, and the other parts more broadly striped with blackish brown; upper parts dark hair-brown, the hind-neck with dark stripes, and pale margins to some of the wing-coverts; outer quills blackish, the inner ones like the back; tail dark greyish hair-brown, obsoletely barred and slightly forked; breast clove-brown with blackish stripes; rest of under parts deep ferruginous, each feather with a dark shaft line; bill blackish horn, yellowish at the base of the lower mandible; cere and legs pale yellow; iris yellowish grey, surrounded by a black line. Culmen 1·6, wing 17·0, tail 11·2, tarsus 2·25 inch. Female rather larger, darker and in general more rufous in tinge. The young bird is dull brown above and below, only rufous on the abdomen, and everywhere the feathers have dull yellowish white or honey-yellow tips giving the bird a spotted appearance, these tips being also larger on the crown and nape ; iris dark.

Hab. Central and southern Europe, of rare occurrence in northern Europe; has once been obtained in England; Africa south to the Cape; Cape Verde Islands; Madagascar; Asia as far east as Afghanistan.

As a rule it is a shyer bird than the Kite, and more buoyant and graceful on the wing. It frequents woodlands, especially near water, and preys on frogs, fish, small mammals, and will also feed on offal and carrion. Its cry is a shrill whistling call, easily distinguishable to a practised ear from that of *M. ictinus.* Its nest resembles that of the Buzzard, and is placed in a tree, and the eggs, from 2 to 4 in number, are deposited in April or May, and resemble those of the Kite and Buzzard, but are as a rule smaller, averaging in size about 2·0 by 1·64.

753. Black-eared Kite.

MILVUS MELANOTIS.

Milvus melanotis, Temm. and Schlegel, Faun. Jap. Aves, p. 14, pls. v. vb. (1850) ; Dresser, ix. p. 277 ; Sharpe, Cat. B. Br. Mus. i. p. 324 ; Tacz. F. O. Sib. O. p. 46 ; Blanf. F. Brit. Ind. Birds, iii. p. 377 ; *M. major*, Hume, Rough Notes, ii. p. 326 (1870).

Korschun-tschernouchey, Russ.; *Achak-Koyruk-sa*, *Mizan-sa*, Turki; *Tombi*, Jap.

♂ *ad.* (Siberia). Differs from *M. migrans* in having the feathers on the head margined with rufous brown and not white ; ear-coverts blackish ; under parts paler and less rufous in colour, and the inner webs of the quills white at the base, forming a conspicuous white patch on the under wing-surface ; bill bluish ; cere yellowish white ; iris hazel-brown ; legs dull china-white. Culmen 1·7, wing 19·3, tail 13·0, tarsus 2·3 inch.

Hab. From the Perm Government in Russia across Asia to Japan; in Siberia north to 64° N. Lat., south to Mongolia, Manchuria, Corea, China, the Himalayas, Burma, and in India south to Bombay in the cold season.

Frequents jungles, groves, and marshes, and in general habits resembles *M. migrans*, and like that species feeds on frogs, fish, small mammals, etc. It breeds from January to May, its nest and eggs being similar to those of *M. migrans*, the latter measuring about 2·31 by 1·8.

754. Yellow-billed Kite.

MILVUS ÆGYPTIUS.

Milvus ægyptius (Gmel.), Syst. Nat. i. p. 261 (1788); Sharpe, Cat. B. Br. Mus. i. p. 320; Dresser, v. p. 657; *M. förskåhli* (Gmel.), tom. cit. p. 263; *M. parasiticus* (Daud.), Traité d'Orn. ii. p. 150 (1800).

♂ *ad.* (Egypt). Resembles *M. migrans*, but the crown is less grey and more rufous in tinge, the tail is more deeply forked, and the whole bill as well as the cere wax-yellow. Culmen 1·5, wing 16·8, tail 11·5, tarsus 2·25 inch.

Hab. Africa from the Mediterranean south to the Cape Colony where, however, it is rare; Palestine; of rare occurrence north of the Mediterranean in Greece and the Cyclades; Asia Minor.

In habits it resembles *M. migrans*, but is bolder and more fearless, and frequents the vicinity of towns, villages, camps, &c. where it feeds on carrion and offal and also on chickens, rats, large insects, and reptiles. It nests on trees, ruins, cliffs, &c., making a somewhat loosely constructed nest of sticks lined with rags, or any available soft material. The eggs, 2 to 3 in number, resemble those of *M. migrans*, but are a trifle smaller and more sparingly marked.

ELANUS, Savigny, 1810.

755. Black-winged Kite.

ELANUS CÆRULEUS.

Elanus cæruleus (Desf.), Mém. Acad. R. des Sciences, 1787, p. 503, pl. 15; Shelley, B. of Egypt, p. 198; Sharpe, Cat. B. Br. Mus. i. p. 336; Dresser, v. p. 663, pl. 363; Blanf. F. Brit. Ind. Birds, iii. p. 379; *E. melanopterus* (Daud.), Traité d'Orn. ii. p. 152 (1800); (Naum.), xiii. Taf. 347; Gould, B. of E. i. pl. 31.

Aisha-hemika, Moor.; *Saqer el Baz*, *Kuhieh*, Arab.; *Kapassi*, Hind.; *Ukussa*, Cing.

♂ *ad.* (Egypt). Forehead, lores, a line over the eye, and sides of the head white; feathers round the eye and eyelashes black; upper parts light ashy grey, the tail paler, the outer tail-feathers white; quills white at extreme base, darker towards the tip; lesser and median wing-coverts and a patch on the outer edge of the wing black; under parts white; bill bluish horn; cere and legs yellow; iris carmine; tarsus feathered in front about half its length. Culmen 1·0, wing 11·6, tail 5·5, tarsus 1·45 inch. Female similar. The young bird has the upper parts brown marked with

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rufous and tipped with white, the tail dull ashy grey tipped with white; under parts white, the breast washed with rufous, and slightly streaked with fulvous; iris dull yellowish.

Hab. The whole of Africa; of rare occurrence in Southern Europe (Greece, Spain, Portugal, and France); has occurred in Germany, Belgium, and has been said to have once been obtained in Ireland; Palestine; South-western Asia, India, Ceylon, and Burma.

In habits it is said to somewhat resemble the Harriers; it inhabits well wooded cultivated districts, the borders of the forest, groves, &c., and is to some extent crepuscular. It feeds chiefly on insects, but also on small mammals. Its flight is peculiar and varied, and reminds one somewhat of a Gull. In North Africa it breeds in March or April and in India at almost all seasons, and probably breeds twice in the year. The nest is a loose structure of twigs, unlined, or sometimes lined with grass, and is placed at some height in a tree. The eggs, 3 to 4 in number, are white or yellowish white, richly blotched with dark fox-red, and measure about 1·55 by 1·22.

PERNIS, Cuvier, 1817.

756. Honey Buzzard.

PERNIS APIVORUS.

Pernis apivorus (Linn.), Syst. Nat. i. p. 130 (1766); (Naum.), i. p. 367, Taf. 35, 36; Hewitson, i. p. 40, pl. xv.; Gould, B. of E. i. pl. 16; id. B. of Gt. Brit. i. pl. 9; Newton, i. p. 121; Dresser, vi. p. 3, pls. 364, 365, 366; Sharpe, Cat. B. Br. Mus. i. p. 344; Saunders, p. 339; Lilford, i. p. 21, pls. 11, 12; *P. a. orientalis*, Tacz. F. O. Sib. O. p. 50.

Buse boudrée, French; *Aguila de Moros*, Span.; *Falco pecchiajuolo*, Ital.; *Wespenbussard*, German; *Wespendief*, Dutch; *Hvepsevaage*, Dan.; *Hvepsehög*, Norweg.; *Bivråk*, Swed.; *Mehilaishaukka*, Finn.; *Osojed*, *Mishelovka-pchelojadnaya*, Russ.; *Khabas el graïn*, Moor.

♂ *ad.* (Germany). Crown and sides of head pale ashy blue, nape brownish; upper parts dark earth-brown, the back tinged with grey; quills tipped with blackish brown; tail greyish brown with dark brown bands; under parts white, the sides of the breast blotched with brown; bill blackish horn; cere yellowish at base, otherwise blackish; edge of gape, legs, and iris yellow. Culmen 1·35, wing 15·8, tail 11·0, tarsus 2·0 inch. The old female has the head and nape brown, the throat buffy white striped with dark brown, and the rest of the under parts white, broadly and closely barred with deep brown. The young bird has the head and neck white, slightly marked with dark brown; upper parts dark brown varied with white; under parts white, the breast with dark shaft stripes; another specimen is almost uniform dark chocolate-brown.

Hab. Europe generally, north to Lapland, but rarely; southern and central Scandinavia; Great Britain; North Africa in winter.

In general habits it differs from the true Buzzard, is a slighter bird, and has a comparatively longer tail. It feeds almost exclusively on insects, chiefly on the larvæ of wasps and bees, but is said by Naumann to feed on buds and vegetable matter in the spring and to plunder other birds' nests. Its call-note is a shrill *kee, kee, kee,* but as a rule it is a silent bird. Its nest is placed in a tree and is constructed of sticks, lined with fresh green foliage. The eggs, 2 to 3, rarely 4, in number, are deposited late in May or in June, and are white so richly blotched with rich reddish brown that the ground-colour is obscured; or else marbled with reddish brown on a rich fox-red ground, and measure about 2·3 by 1·64.

FALCO, Linn., 1766.

757. GYRFALCON.

FALCO GYRFALCO.

Falco gyrfalco, Linn. Syst. Nat. i. p. 130 (1766); Naum. xiii. taf. 391; Gould, B. of Gt. B. i. pl. 16; Newton, Ooth. Wolley. p. 87, pl. viii. tab. C.; (Sharpe), Cat. B. Br. Mus. i. p. 416; Dresser, vi. p. 15, pl. 367; Saunders, p. 345; Lilford, i. p. 29, pl. 15; *F. rusticolus gyrfalco,* Ridgway, p. 246.

Jagdfalke, German; *Jagtfalk,* Dan., Norweg., and Swed.; *Riefsakfalle,* Lapp.; *Tunturivalli,* Finn.; *Krechet,* Russ.

♂ *ad.* (Norway). Upper parts dark slate-grey barred with light blue grey, in some places nearly white; head blackish grey with whitish markings on the nape and sides of the neck; rump and upper tail-coverts clear blue-grey barred with slate-blue; quills dark brown externally mottled with grey, the inner webs white with dark bars; tail slaty brown barred with blue-grey and tipped with white; a broad moustachial stripe slaty brown; under parts white, the breast and abdomen with dark drop-shaped stripes, the flanks and under tail-coverts barred with slaty brown; bill blue, becoming black towards the tip; cere, edge of eyelid, and feet yellow; iris nearly black. Culmen 1·35, wing 13·6, tail 8·5, tarsus 2·4 inch. Female similar but larger. The young bird has the head and neck buffy white striped with dark brown, the upper parts dark brown with buffy white margins, the under parts white, on the throat narrowly and otherwise broadly and closely striped with dark brown, sometimes so closely that scarcely any white is visible.

Hab. Northern Scandinavia and Lapland, rarely straying down to continental Europe; has once or twice been obtained in England; of doubtful occurrence in North Asia; Arctic North America.

Inhabits rocky localities and is a bold powerful bird, swift on the wing, and when caught and trained highly esteemed for falconry purposes being docile and courageous. It feeds on small mammals, such as squirrels, lemmings, &c., and birds, especially Willow Grouse and Ptarmigan. Its nest, which is constructed of sticks sparingly lined with grass, is placed on a rock or a tree, sometimes even on the ground, and in April or May 3 to 4 eggs are deposited, which are somewhat finer in texture of shell than those of *F. islandus*, and are so closely spotted or freckled with fox-red or reddish orange on a dull white ground that the ground-colour is often entirely obscured. In size they measure about 2·29 by 1·81.

758. Greenland Falcon.

FALCO CANDICANS.

Falco candicans, Gmel. Syst. Nat. i. p. 275 (1788); Naum. i. p. 269, Taf. 21; Gould, B. of Gt. Brit. i. pls. xiii., xiv., xv.; Newton, i. p. 36; (Sharpe), Cat. B. Br. Mus. i. p. 411; Dresser, vi. p. 21, pls. 368, 369; Saunders, p. 341; Lilford, i. p. 36, pl. 18; *Falco islandicus*, Lath. Ind. Orn. i. p. 32 (1790); Audubon, B. Am. pl. 366; Gould, B. of E. i. pl. 19; *F. islandus*, Ridg. p. 244 (nec. Gmel.); *F. holboelli*, Sharpe, P.Z.S. 1873, p. 415; (id.), Cat. B. Br. Mus. i. p. 415, pl. xiii.

Kirksoviarsuk-kakortuinak, Greenl.

♂ *ad.* (Greenland). General colour white, the feathers on the upper parts marked with a wide V-shaped black spot towards the tip, quills marked with black towards the tip; tail pure white, under parts slightly striated with black on the lower flanks; bill yellowish, becoming horn-blue towards the tip; legs yellowish; iris dark brown. Culmen 1·3, wing 14·0, tail 8·2, tarsus 2·75 inch. Female similar but larger. The young birds are more or less striped, with broad almost drop-shaped blackish brown markings above, and the head and under parts with narrow stripes, and the tail is more or less marked with blackish brown; bill pale horn-blue; legs greyish blue.

Hab. Greenland, straying south to North-west Europe and Northern North America, and also found, though rarely, in Northern Asia.

In habits it does not differ from *F. gyrfalco*, and though like that bird strong and swift on the wing it is not held in such esteem by falconers as the Gyrfalcon, though in the times when falconry was a royal sport, trained birds were of great value chiefly for their beauty. It nests on cliffs, its nest and eggs resembling those of *F. gyrfalco*, but the latter are as a rule somewhat rougher in texture of shell.

759. ICELAND FALCON.

FALCO ISLANDUS.

Falco islandus, Gmel. Syst. Nat. i. p. 271 (1788) ; Naum. i. Taf. 22, figs. 1, 2, Taf. 390, fig. 2 ; Hewitson, i. p. 22, pl. vii. ; Gould, B. of Gt. Brit. i. pls. 11, 12 ; Newton, i. p. 46 ; (Sharpe), Cat. B. Br. Mus. i. p. 414, pl. 13, left figure ; Dresser, vi. p. 25, pls. 370, 371 ; Saunders, p. 343 ; Lilford, i. p. 31, pls. 16, 17 ; *F. rusticolus*, Ridg. p. 245.

Falki, Veidifalki, Valur, Icel. ; *Fålkur*, Færoe ; *Islandsk-Falk*, Dan.

♂ *ad.* (Iceland). Head and nape dull white striped with slaty black, upper parts dark brownish slate, barred with buffy white ; the rump and upper tail-coverts dull slate-blue, barred with blue-grey ; quills slate-black on the outer web marked, and on the inner web barred with buffy white ; tail ash-grey barred with brownish slate and tipped with white ; chin and upper throat white ; rest of under parts white, the lower throat streaked with blackish brown, the breast and abdomen with blackish streaks terminating with a drop-shaped spot, the upper flanks with heart-shaped marks, the lower flanks and under tail-coverts with bars ; bill horn-blue, darker at the tip ; cere and legs yellow ; iris dark brown. Culmen 1·35, wing 14·5, tail 8·9, tarsus 2·3 inch. Female similar but larger. The young bird differs from that of *F. gyrfalco* in having the head lighter, in lacking the blackish moustachial streak, and in having the back and tail less marked with lighter colour.

Hab. Iceland and southern Greenland, straying occasionally to continental Europe, Great Britain, and the East coast of North America.

In habits it does not differ from *F. gyrfalco*. Its eggs, 3 to 4 in number, are laid in May and are yellowish clay-coloured, very closely marked with reddish orange, but some are white somewhat sparingly blotched with reddish orange, whilst others are more profusely blotched with dull, almost chestnut-red. In size they measure about 2·28 by 1·81.

Of *Hierofalco uralensis*, Severtz and Menzbier (Orn. Geogr. Europ. Ross. i. p. 288, 1882) (*H. grebnitzkii*, Severtz) which appears to be very similar to, if not identical with, the present species or *F. gyrfalco*, I have not been able to examine a specimen.

760. LORENZ'S GYRFALCON.

FALCO LORENZI.

Falco lorenzi, Menzbier, Bull. B. O. Club, xi. p. 3 (1900).

ad. Resembles the northern Gyrfalcons in its plumage, the general colour of the upper parts being bluish, and it is barred like them, but it has the tarsus bare on more than half its length as in *F. milvipes*, to which it is said to be nearly allied, but differs conspicuously in colour.

Hab. Tomsk and Yeneseisk in Siberia.

Nothing is known respecting this bird except that three specimens were obtained in winter in the above named localities.

761. ALTAI GYRFALCON.

FALCO ALTAICUS.

Falco altaicus (Menzbier), Orn. Turkest. p. 272 (1891).

♂ *ad.* Differs from *F. gyrfalco* in having the upper parts reddish brown washed with ash, the under parts ochraceous with tear-shaped dark brown stripes; tail brown, tipped with pale ochreous, the two middle feathers unbarred, the rest with indistinct oval transverse reddish brown spots; tarsus bare for more than half its length; bill bluish horn, yellowish at the base; cere and legs yellow. The young female differs from *F. gyrfalco* in having the crown, head, and upper parts dark brown with a few obsolete dull buff spots and bars, the tail barred with greyish buff, the under parts brown, the flanks and thighs barred, the rest of the under parts spotted and striped with buffy white. Culmen 2·0, wing 14·6, tail 9·10, tarsus 2·2 inch.

Hab. The mountain ranges bordering the plateau of Central Asia on the north and west.

I find nothing on record about the habits and nidification of this bird, but an egg, obtained in the Altai mountains with the parent bird, and now in my collection, resembles dark eggs of *F. candicans*, but is smaller, measuring 2·16 by 1·67.

762. Saker.

FALCO CHERRUG.

Falco cherrug, J. E. Gray in Hardw. Ill. Ind. Zool. ii. pl. 25 (1833–34); Blanf. F. Brit. Ind. Birds, iii. p. 420; *F. sacer*, Gmel. Syst. Nat. i. p. 273 (1788 nec. Forst.); Gould, B. of Asia, i. pl. 5; Dresser, vi. p. 59, pl. 376; (Sharpe), Cat. B. Br. Mus. i. p. 417; *F. lanarius*, Pall. Zoogr. Ross. As. i. p. 330 (1811 nec. Gmel.); Naum. i. p. 279, Taf. 23; Gould, B. of E. i. pl. 20; *F. cyanopus*, Thienem. Rhea, i. p. 62, Taf. 1, 2 (1846).

Faucon sacre, French; *Il sacro,* Ital.; *Würgfalke,* German; *Slagfalk,* Swed.; *Balabann,* Russ.; *Dughán,* Turk.; *Uetälgi,* Tartar; *Bas, Chark,* Pers.; *Saqer-el-hor,* Arab.; *Charg* ♀, *Chargela* ♂, Hindu.

♂ *ad.* (S. Russia). Crown and nape white tinged with rufous brown, and striped with blackish brown; upper parts generally dark earth-brown with pale fulvous margins; quills dark brown barred with white on the inner web; tail brown marked with buffy white oval spots, the middle feathers sometimes uniform brown; sides of head, chin, throat, and breast white, the first sparingly striped, the others with a few spots of blackish brown, moustachial stripe ill defined; rest of under parts white, more or less striped with elongated spots of blackish brown, sometimes almost unmarked; bill bluish horn, paler at the base; cere and legs yellow; iris dark brown. Culmen 1·0, wing 14·0, tail 8·0, tarsus 2·35 inch. Female similar but larger. The young bird has the head and nape buffy white closely streaked with blackish brown; upper parts darker than the adult; upper tail-coverts with broad dull rufous and buffy white margins; moustachial stripe well defined; chin white; under parts buffy white closely and broadly striped with blackish brown; cere and legs pale blue-grey; iris dark brown.

Hab. Eastern and south-eastern Europe, rarely straying west; not visiting Great Britain; has once occurred in Scandinavia; North-east Africa; Asia minor and Palestine (rare); Central Asia and Persia to N.W. India and China.

Is a frequenter of the plains and desert, and preys on lizards, small mammals, and birds. For falconry purposes it is highly esteemed and used to hawk gazelles, hares, bustards, &c. It nests in trees, rarely in rocks, and builds a tolerably well constructed, but not a large, nest of sticks, lined with finer twigs, grass, wool, &c., and in April lays 2 to 4 eggs, somewhat elongated oval in shape, richly marked and blotched with dull or dark red on a white or yellowish white ground, in size averaging 2·10 by 1·62.

763. SHANGHAR FALCON.

FALCO MILVIPES.

Falco milvipes, Hodgs. in Gray's Zool. Misc. p. 81 (1844) ; Jerdon, Ibis. 1871, p. 240 ; Dresser, ix. p. 281, pl. 377 ; Blanf. F. Brit. Ind. Birds, iii. p. 421 ; *F. hendersoni*, Hume, Ibis. 1871, p. 240 ; id. Lah. to Yark., p. 171, pl. 1.

Aitalgu, Turki ; *Chark*, Pers.

ad. (Asia Minor). Differs from *F. sacer* in having the upper parts rufous conspicuously barred with dark brown, the tail also similarly barred, and not marked with spots. The young bird has the bars irregular and ill defined, those on the tail more or less imperfect.

Hab. Transcaspia ; Central Asia ; Afghanistan and the Punjab (rare) ; Mongolia ; the Pamir ; Tibet ; Yarkand ; has occurred as far west as Tarsus, Tiflis, and Athens.

In habits it does not appear to differ from *F. cherrug*, and frequents also plains and the desert. Unlike the Saker it is not considered good for falconry purposes. It was found breeding in Transcaspia on the Afghan frontier by Messrs. Radde and Walter, who say that the nest was scantily formed, and was placed on the point of a precipice, and contained young birds.

764. PEREGRINE FALCON.

FALCO PEREGRINUS.

Falco peregrinus, Tunstall, Orn. Brit. p. 1 (1771) ; Naum. i. p. 285, Taf. 24, 25 ; Hewitson, i. p. 24, pl. viii. ; Gould, B. of E. i. pl. 21 ; id. B. of Gt. Brit. i. pl. 17 ; Newton, i. p. 53 ; Dresser, vi. p. 31, pl. 372 ; Ridg. p. 247 ; Blanf. F. Brit. Ind. Birds, iii. p. 413 ; Saunders, p. 347 ; Lilford, i. p. 40, pls. 19, 20 ; *F. communis*, Gmel. Syst. Nat. i. p. 270 (1788) ; Sharpe, Cat. B. Br. Mus. i. p. 376 ; Tacz. F. O. Sib. O. p. 77 ; *F. anatum*, Bp. Comp. List, p. 4 (1838).

Faucon pèlerin, French ; *Falcão*, Portug. ; *Alcon*, Span. ; *Falcone*, Ital. ; *Tauben Falke*, *Wander Falke*, German ; *Valk*, Dutch ; *Vandrefalk*, Dan. ; *Pilegrimsfalk*, Norweg. ; *Pilgrimsfalk*, Swed. ; *Rievsakfalle*, Lapp. ; *Muuttohaukka*, *Pieni-Valli*, Finn. ; *Sapsan*, *Sokol*, Russ. ; *Teir-el-hor*, Moor. ; *Tschakyr*, Arab. ; *Bhyri* ♀, *Bhyri-bacha*, Hindu. ; *Hayabusa*, Jap.

♂ *ad.* (Germany). Crown, nape, space round the eye and a broad mystacal stripe sooty black ; upper parts generally dark slate-blue, paler and bluer on the rump and upper tail-coverts, with darker bars ; quills greyish black narrowly tipped with white, and with oblong greyish white spots or bars on the inner web; tail blackish with slate-blue bars, becoming darker towards the end and narrowly tipped with brownish white; under parts warm buffy white, the throat and upper breast striped, the rest of the under parts boldly barred with blackish; bill bluish horn, bluer at the base; cere and legs yellow; iris brown. Culmen 1·1, wing 12·2, tail 6·4. tarsus 2·2 inch. Female similar but larger. In the young bird the black on the head and neck is tinged with brown; crown and nape marked with dull white and rufous white; upper parts dark brown with paler margins; tail dark greyish brown, tipped with white and irregularly barred with rufous buff; under parts white, tinged with rufous buff and broadly striped with blackish brown; cere and feet bluish.

Hab. Europe generally, from Lapland to the Mediterranean, Greenland, the Færoes; Great Britain; Canaries; Africa south to Natal; Asia generally, from Kamchatka to China, Manilla, India, Borneo, Java, and Sumatra, east to Japan; America from the high north to Argentina; the West Indies.

This, one of our most active and powerful falcons, frequents rocks, woods, and mountainous localities, and will occasionally visit cities and villages in pursuit of pigeons. As a rule it prefers the vicinity of water and is often to be met with on the sea-coast. It preys on pigeons, game-birds, water-fowl of various kinds, small mammals, &c. Its call is a loud clear *kaak, kaak, kaak*, but is not often heard except in the breeding season. It nests on the ledge of a rock, on a tree, or even on the ground, making a scanty nest or utilizing that of some other bird, and in March or April 4, sometimes only 3, eggs are deposited. These are usually dull brick-red in ground-colour closely spotted or dotted with reddish brown or dark red, but some are blotched with rich rufous on a reddish or yellowish or even on a nearly pure white ground. In size they average about 2·03 by 1·61, but American eggs, as a rule, are rather larger. The Peregrine exhibits great attachment to its nesting place, and will occupy the same site for many years in succession.

765. LESSER PEREGRINE.

FALCO PUNICUS.

Falco punicus, Levaill. junr. Expl. Algér. Atlas, Ois. pl. I (1850); Irby, Orn. Str. Gibr. p. 191, pl. 9; *F. minor*, Dresser, vi. p. 43, pl. 373 (nec. Bp.); *F. brookei*, Sharpe, Ann. and Mag. Nat. Hist. xi. p. 20 (1873).

♂ *ad.* (Morocco). Differs from *F. peregrinus* in being smaller, the under parts more ruddy in colour, and in having the legs and feet much more slender. Culmen 1·05, wing 11·0, tail 5·4, tarsus 1·75 inch. Female similar and scarcely larger. The young bird resembles that of *F. peregrinus* but is smaller, has the upper parts paler, and the striations on the under parts narrower and more profuse.

Hab. North Africa; Rhodes; Asia Minor rarely.

In habits and nidification this species does not appear to differ from *F. peregrinus.*

766. BARBARY FALCON.

FALCO BARBARUS.

Falco barbarus, Linn. Syst. Nat. i. p. 125 (1766); Sharpe, Cat. B. Br. Mus. i. p. 386; Dresser, iii. p. 47, pl. 347; Shelley, B. of Egypt, p. 187; Blanf. F. Brit. Ind. Birds, iii. p. 417; *F. pelegrinoides*, Temm. Pl. Col. 479 (1824); *F. babylonicus*, Gurney, Ibis, 1861, p. 218, pl. vii.

Bourni, Arab.; *Sháhin*, *Safed Shahin*, Hindu.

♀ *ad.* (N. Africa). Upper parts paler and greyer than in *F. peregrinus*, the head lighter; nape rusty red, blotched with blackish slate; under parts creamy white, tinged with rufous; throat and breast unmarked; flanks and lower abdomen faintly barred with blackish; soft parts as in *F. peregrinus.* Culmen 0·9, wing 11·0, tail 5·5, tarsus 1·7, middle toe with claw 2·0 inch. Male similar, but somewhat smaller. The young bird resembles that of *F. punicus.*

Hab. Northern Africa, straying rarely to the northern shores of the Mediterranean; South-west and Central Asia; North-West India as far south as Nerbudda, and as far east as Oude in winter.

In habits it resembles the Peregrine, and being bold, strong, and docile is highly esteemed by falconers. It frequents open dry country, and nests in cliffs and also in old buildings, its eggs resembling those of the Peregrine, but are smaller. Birds from Asia (*F. babylonicus*) are as a rule rather larger in size.

767. LANNER.

FALCO FELDEGGI.

Falco feldeggi, Schlegel, Abh. Geb. Zool. p. 3, Taf. 10, 11 (1841); Sharpe, Cat. B. Br. Mus. i. p. 389; Dresser, vi. p. 51, pl. 375; *F. lanarius*, Schlegel, Rev. Crit. p. 2 (1894 nec. Pall.); Gould, B. of As. i. pl. 6; *F. erlangeri*, Kleinschmidt, Aquila, 1901, p. 33.

Feldeggsfalke, Germ.; *Lanario*, Ital.; *Sager-schahin Täir el Hór*, Arab.

♂ *ad.* (Egypt). Forehead dull white ; crown and nape pale creamy rufous, finely striated with blackish, the lower nape blotched with brown ; forepart of back and wing-coverts dull slaty brown, barred and tipped with buffy ash-grey, becoming slaty ash, barred with ash-blue on the lower back and upper tail-coverts ; quills ashy black, barred with white on the inner web ; tail ashy brown, closely banded with ashy grey, and tipped with buffy white ; space round the eye and an irregular stripe to the nape deep brown ; moustache small and narrow ; chin and upper throat white ; rest of under parts buffy white, with drop-shaped blackish brown spots and stripes ; bill pale horn at base, dark horn at tip ; cere and legs yellow ; iris brown. Culmen 1·2, wing 13·15, tail 7·3, tarsus 2·0 inch. Female similar but larger. The young bird has the crown paler, striped with blackish brown, the upper parts dull brown, with paler margins, the tail greyish brown, the outer feathers irregularly barred, and tipped with white, the under parts white, the breast and abdomen broadly striped with dark brown ; legs dull plumbeous, tinged with yellow.

Hab. Southern Europe, rarely straying further north ; North Africa ; Asia Minor (rare) ; Palestine.

Does not differ appreciably from its allies in general habits ; it frequents plains, rocky localities, as also groves, lagoons, and marshes when water-fowl are found in any numbers. With the Arabs it is held in high esteem for falconry purposes, though European falconers consider it as inferior to the Peregrine. As a rule it nests in the rocks, and has, in Egypt, been found breeding on the pyramids, and in Spain in trees, having taken possession of a deserted nest of some other large bird. When placed on a rock its nest is scanty, being merely a little material collected together. Its 4 eggs, which are usually deposited in April, closely resemble those of the Saker, but are as a rule darker ; in size they average 2·13 by 1·59. Examples from N.W. Africa (*F. erlangeri*) are as a rule paler, and less marked with blackish, especially on the crown.

768. MERLIN.

FALCO ÆSALON.

Falco æsalon, Tunstall, Orn. Brit. p. i. (1771) ; Naum. i. p. 303, Taf. 27 ; Hewitson, i. p. 30, pl. x. fig. 1 ; Gould, B. of E. i. pl. 24 ; id. B. of Gt. Brit. i. pl. 19 ; Newton, i. p. 74 ; Dresser, vi. p. 83, pls. 380, 381 ; (Tacz.), F. O. Sib. O. p. 87 ; Saunders, p. 351 ; Lilford, i. p. 50, pls. 24, 25 ; *F. regulus*, Pall. Reise, ii. Anhang, p. 707 (1773) ; David and Oust. Ois. Chine, p. 34 ; Sharpe, Cat. B. Br. Mus. i. p. 406 ; (Blanf.), F. Brit. Ind. Birds, iii. p. 426 ; *F. lithofalco* ; Gmel. Syst. Nat. i. p. 278 (1788).

Faucon Émérillon, French ; *Esmerejon*, Span, ; *Smeriglio*, Ital. ; *Zwergfalke*, Germ. ; *Smelleken*, Dutch ; *Steenfalk*, *Dværgfalk*, Dan. and Norweg.; *Dvergfalk,* Swed.; *Pikkuhaukka, Poutahaukka,* Finn.; *Cicasfalli,* Lapp.; *Derbnic,* Russ.; *Juju,* Arab.; *Dourai* ♀, *Dourela* ♂, Hindu.; *Kocho-genbo,* Jap.

♂ *ad.* (Scotland). Crown and upper parts clear slate-blue, with blackish shaft lines; a collar and sides of neck pale rufous, with dark lines; quills blackish, with white bars on the inner web; tail paler than the back, with a broad subterminal black band, and with indistinct basal bars; sides of head dull white, with fine blackish stripes; chin and upper throat white; rest of under parts white, washed with rufous and striped with blackish brown, the thigh-feathers more rufous; bill bluish horn, darker at the tip; legs and cere yellow; iris dark brown. Culmen 0·7, wing 7·9, tail 5·3, tarsus 1·45 inch. Female larger and differing in having the upper parts dark brown, with a greyish tinge, with black shaft-stripes, edged and spotted with reddish brown; tail dark brown, with rufous buff bands and tipped with buffy white; chin and upper throat white; rest of under parts whitish, broadly striped with brown. The young resemble the female, but males are a little greyer on the tail and rump.

Hab. Europe generally, from Iceland and Northern Scandinavia to Great Britain; southern Europe and North Africa in winter, south to Nubia; Asia east to Corea, north to Northern Siberia, south to Northern India, Mongolia, China and Japan in winter.

Frequents moors, rocks, and more open places than the Hobby, and is a bold and game bird, swift and active on the wing, preying chiefly on small birds and mammals, but it also feeds to some extent on insects. It generally nests on the ground, but in some countries sometimes makes use of the nest of some other bird in trees. When constructed by the bird itself the nest is flat and not large, built of sticks and heather. The eggs, from 4 to 6 in number, are dull brick-red closely spotted and mottled with dark brownish red, sometimes faintly tinted with purple, and in size average 1·55 by 1·21.

769. HOBBY.

FALCO SUBBUTEO.

Falco subbuteo, Linn. Syst. Nat. i. p. 127 (1766); Naum. i. p. 296, Taf. 26; Hewitson, i. p. 26, pl. ix. fig. 1; Gould, B. of. E. i. pl. 22; id. B. of Gt. Brit. pl. 18; Newton, i. p. 65; Dresser, vi. p. 69, pls. 378, 379; Sharpe, Cat. B. Br. Mus. i. p. 395; Tacz. F. O. Sib. O. p. 84; Blanf. F. Brit. Ind. Birds, iii. p. 422; Saunders, p. 349; Lilford, i. p. 44, pls. 20, 21.

Le Hobereau, French; *Alcotán,* Span.; *Falcão tagarote,* Portug.; *Lodolajo,* Ital.; *Lerchenfalke,* Germ.; *Boomvalk,* Dutch; *Larkefalk,* Dan; *Lärkfalk,* Swed.; *Leivohaukka,* Finn.; *Tscheglok, Sokol-Bielogorlik,* Russ.; *Morassani,* Oude; *Chigo-hayabusa,* Jap.

♂ *ad.* (Finland). Upper parts dark slate-grey, clearer on the rump and upper tail-coverts, darker and often tinged with brown on the head; lores, supercilium, and an ill-defined nuchal collar, buffy white, the last inclining to ferruginous; quills black, on the inner web irregularly barred with rufous; tail slate-grey, all but the two middle feathers barred on the inner web and tipped with ferruginous; cheek and moustache black, the chin and sides of the neck warm creamy white; rest of the under parts creamy white, the breast and flanks striped with black; under wing-coverts and axillaries buffy white, the former striped, the latter barred with blackish brown; thighs and under tail-coverts rich rust-red; bill light blue-black, yellowish at the base; cere and legs yellow; iris brown. Culmen 0·7, wing 10·0, tail 6·0, tarsus 1·1 inch. Female similar but larger. The young bird has the upper parts blackish brown, with fulvous margins, the under parts fulvous white, the breast and flanks blotched and striped with blackish brown, the lower abdomen becoming rufescent fulvous, also streaked and mottled.

Hab. A summer visitor to the British Islands and Northern Europe up to about 65° N.; the Canaries; Africa south to the Cape Colony; Asia Minor and Asia east to China, Corea, and Japan, north to Kamchatka, south to the Himalayas and the plains of India. In South Africa it is replaced by *F. cuvieri,* Smith, and in India and the Malay Archipelago by *F. severus,* Horsf.

Frequents woodlands and groves and is to some extent crepuscular in its habits. Its food consists largely of insects of various kinds, but it is swift on the wing and bold, and frequently preys on small birds. It is a late breeder and generally makes use of the deserted nest of a crow or some other large bird, and in June deposits 3 to 5 eggs, which on a yellowish white ground are closely covered with yellowish red spots and blotches, which but seldom become rufous like the eggs of the Kestrel. In size they average 1·62 by 1·31.

770. ELEONORA'S FALCON.

FALCO ELEONORÆ.

Falco eleonoræ, Gené, Rev. Zool. 1839, p. 105; (Gurney), Ibis, 1869, p. 445, pl. xvi.; Dresser, vi. p. 103, pl. 383; Sharpe, Cat. B. Br. Mus. i. p. 404; *F. arcadicus,* Linderm. Isis, 1843, p. 329, Taf. 1; *F. dichrous,* Erhard, Naumannia, 1858, p. 25.

Falco della Regina, Ital.; *Barbáki, Warwakion*, Greek.

♂ *ad.* (Cyclades). General colour dark slate-grey, tinged with brown on the upper parts, rather clearer on the rump and upper tail-coverts; quills blackish brown, washed with slate; tail slate-colour, the outer feathers slightly barred with dull blackish; under parts blackish grey, tinged with rufous here and there, the thighs and under tail-coverts clear dark slate-colour; beak horn-blue, paler at the base; cere pale greenish yellow; legs pale lemon-yellow; iris brown. Culmen 0·75, wing 11·9, tail 7·5, tarsus 1·3 inch. Female dusky brown above, tinged with slate, the nape tinged with rufous; tail slate-grey, tipped with fulvous, and thickly barred with rufous and dusky; orbital region, lores, and moustache black; hind-cheeks and throat rich buff; under parts buff, becoming rufous on the abdomen, and striped with black; thighs deep chestnut, with black shaft-stripes; legs and feet greenish yellow. Culmen 0·85, wing 12·9, tail 7·5, tarsus 1·4 inch. The young bird resembles the female, but the feathers on the upper parts are margined with pale rufous; cheeks, under parts, and thighs pale rufous buff, the dark markings well defined.

Hab. The islands in the Mediterranean, rarer on the south shores of Europe; North-west and West Africa, south to Madagascar; Palestine, Syria.

Frequents rocky localities, and in general habits resembles *F. subbuteo.* Its call-note is a not very loud *kek, kek,* or *wek, wek, wek.* On the wing it is swift and active, and is recognizable by its long wings. It preys chiefly on small birds of various kinds, but also on insects and reptiles. It makes no nest, but deposits its eggs late in July or in August on the ledge of a cliff or on the ground. These are 2 or 3 in number, and resemble those of *F. subbuteo,* and measure about 1·68 by 1·32.

771. RED-LEGGED FALCON.

FALCO VESPERTINUS.

Falco vespertinus, Linn. Syst. Nat. i. p. 129 (1766); Hewitson, i. p. 28, pl. ix. figs. 2, 3; (Gould), B. of Gt. Brit. i. pl. 20; Newton, i. p. 69, Dresser, vi. p. 93, pl. 382; (Sharpe), Cat. B. Br. Mus. i. p. 443; (Tacz.), F. O. Sib. O. p. 90; Saunders, p. 353; Lilford, i. p. 45, pl. 23; *F. rufipes*, Beseke, Vög. Kurl. p. 20, Taf. 3, 4 (1792); Naum. i. p. 311, Taf. 28; Gould, B. of E. i. pl. 23.

Faucon kobez, French; *Falco cuculo*, Ital.; *Rotfussfalke* Germ.; *Rödfodfalk*, Dan.; *Rödbent Falk*, Swed.; *Punajalkahaukka*, Finn.; *Kobtschik*, Russ.; *Kirghé*, Tartar.

♂ *ad.* (Malta). Entire upper parts dark plumbeous, paler on the wing-coverts; quills silver-grey above, black below; tail black; under parts blue-grey ; thighs, vent, and under tail-coverts rich chestnut ; under wing-coverts greyish black ; bill horn-colour, blackish at tip; cere, bare space round the eye, and legs bright brownish red ; iris bright brown. Culmen 0·75, wing 9·7, tail 5·8, tarsus 1·0 inch. The female has the head, neck, and sides of neck rufous ; upper parts and tail ashy grey, barred with darker grey ; quills ashy grey, barred with reddish white on the inner web ; throat and cheeks white, tinged with rufous ; moustache and rest of under parts, with the under wing-coverts rufous like the head ; soft parts duller than in the male. The young bird resembles the female, but is paler, the head and under parts considerably paler, the forehead hoary white, and the crown dark striped.

Hab. Europe generally, up to Sweden and Archangel, rarer in the west; a somewhat rare visitor to Great Britain, has once occurred in Ireland, and has strayed to the Canaries; Africa south to Damaraland in winter; Asia Minor, western and central Asia, becoming rare further east, but has occurred as far east as the Baikal district.

In habits it resembles the Kestrel more than the Hobby. It affects groves and the open country rather than the forest, and feeds chiefly on insects of various kinds, occasionally however capturing small birds. Its note is a clear, shrill *ki*, uttered several times in succession. It breeds in trees, frequently taking possession of deserted nests of Crows and Magpies, and in June deposits 3 to 4 eggs, which resemble those of *F. subbuteo*, but are smaller and darker, more approaching those of the Kestrel. In size they average 1·45 by 1·16.

772. Eastern Red-legged Falcon.

FALCO AMURENSIS.

Falco amurensis, Radde, Reis. Ost. Sib. Vögel, p. 102, Taf. i. fig. *a*, *b* (1863) ; (Sharpe), Cat. B. Br. Mus. i. p. 445 ; (Blanf.), F. Brit. Ind. Birds, iii. p. 424 ; (Tacz.), F. O. Sib. O. p. 93 ; Gurney, Ibis, 1868, p. 41, pl. ii.

♂ *ad.* (Siberia). Resembles *F. vespertinus*, but has the wing lining and axillaries pure white. Culmen 0·75, wing 9·0, tail 5·0, tarsus 1·1 inch. The female differs from that of *F. vespertinus* in having the head browner, the under parts paler, the breast spotted, and the flanks barred with blackish ; the wing-lining white with brown spots, and the axillaries barred white and dark brown.

Hab. South-eastern Siberia; Mongolia; Northern China; wintering in India, Burma, and East Africa; has occurred in

Asia as far west as Pegu, the Western Himalayas, the Deccan, the Nilgiris, the Carnatic, and Ceylon.

In habits it does not differ from *F. vespertinus*, and like that species feeds almost entirely on insects of various kinds and small reptiles. Its nest and eggs also resemble those of that species.

773. KESTREL.

FALCO TINNUNCULUS.

Falco tinnunculus, Linn. Syst. Nat. i. p. 127 (1766) ; Naum. i. p. 323, Taf. 30 ; Hewitson, i. p. 32, pl. x. figs. 2, 3 ; Gould, B. of E. i. pl. 26 ; Newton, i. p. 78 ; Dresser, vi. p. 113, pl. 384 ; (Sharpe), Cat. B. Br. Mus. i. p. 425 ; (Tacz.), F. O. Sib. O. p. 95 ; Seebohm, B. Jap. Emp. p. 194 ; Saunders, p. 355 ; Lilford, i. p. 53, pl. 26 ; *F. alaudarius*, Gmel. Syst. Nat. i. p. 279 (1788) ; Gould, B. of Gt. Brit. i. pl. 21 ; (Blanf.), F. Brit. Ind. Birds, iii. p. 428 ; *F. t. japonicus*, Temm. and Schlegel, Faun. Jap. Aves, p. 2, pls. 1, 1B ; *F. t. canariensis* (Koenig), J. f. O. 1890, p. 327, pt. i.

Cresserelle, French ; *Peneireiro, Francelho*, Portug. ; *Cernicalo*, Span. ; *Gheppio*, Ital. ; *Turmfalke*, Germ. ; *Taarnfalk*, Norweg. and Dan. ; *Tornfalk*, Swed. ; *Tornihaukka*, Finn. ; *Obiknovennaya-Pustelga*, Russ. ; *Bouschrada*, Arab. ; *Karontia*, *Narzi*, ♀, *Narzinak* ♂, Hindu. ; *Maguso-daka*, Jap.

♂ *ad.* (England). Head, neck, lower back, rump, upper tail-coverts, and tail blue-grey ; the head narrowly striped, and the tail subterminally broadly banded with black ; rest of upper parts chestnut-red, with black triangular spots ; quills blackish, the inner web with whitish bars ; forehead and eyebrow whitish ; moustache blackish grey ; under parts rufescent fawn, the breast streaked, the sides spotted with black ; thigh-feathers pale chestnut, unspotted ; bill yellow at base, then blue, tipped with black ; cere, orbital region, and legs yellow ; iris brown. Culmen 1·75, wing 9·2, tail 7·0, tarsus 1·6 inch. The female has the upper parts and tail rufous, the former barred, the latter banded with black and tipped with fulvous ; chin and abdomen pale dull fulvous ; breast dull rufous, striped with black ; flanks indistinctly barred. The young bird resembles the female, but is paler.

Hab. Europe generally, from Lapland to the Mediterranean, but chiefly in summer in the northern parts ; Madeira, the Canaries and Azores ; Africa south to Abyssinia ; Asia Minor and Asia north to northern Siberia, south to northern India ; China ; Corea ; Japan.

Inhabits the woods, plains, and cultivated localities, where it may be seen carefully quartering the ground, occasionally hovering in the air in search of its prey. It feeds on mice, insects, and reptiles, but seldom on small birds. Its cry is a shrill *kee, kee, kee,* uttered several times in succession. It breeds in old ruins, church towers, cliffs, &c., and sometimes in trees, taking possession of deserted nests of other birds, and in April 4 to 5 eggs are laid, which in ground-colour vary from white and reddish white to dull reddish, and are closely marked and blotched with fox-red, dull chestnut, and purplish chestnut. In shape they are roundish oval, and in size average about 1·61 by 1·29.

In tone of plumage the Kestrel varies considerably, birds from Madeira, the Canaries, East Africa, and Japan being very dark in colouration, and have indeed been described as specifically separable, but I cannot see that this view is correct.

774. Lesser Kestrel.

FALCO CENCHRIS.

Falco cenchris, Naum. Vög. Deutschl. i. p. 318, Taf. 29 (1822); Dresser, vi. p. 125, pl. 385; Blanf. F. Brit. Ind. Birds, iii. p. 430; Saunders, p. 357; Lilford, i. p. 55; pl. 27; *F. tinnunculoides,* Temm. Man d'Orn. i. p. 31 (1822); Gould, B. of E. i. pl. 27; *F. pekinensis* (Swinhoe), P.Z.S. 1871, p. 341; Sharpe, Cat. B. Br. Mus. i. p. 437; "*F. naumanni,* Fleisch"; Sharpe, tom. cit. p. 435 (1874).

Faucon cresserellette, French; *Primilla, Primita,* Span.; *Rötelfalke,* Germ.; *Grillajo,* Ital.; *Krasnaya Pustelga,* Russ.

♂ *ad.* (Styria). Differs from *F. tinnunculus* in being smaller, in having the back, scapulars, and wing-coverts rich cinnamon, or vinous brick-red, unspotted, some of the inner secondaries slate-grey instead of rufous, and the claws white, not blackish. Culmen 0·75, wing 9·0, tail 6·0, tarsus 1·2 inch. The female resembles that of *F. tinnunculus,* but is smaller and has white claws.

Hab. Southern Europe; a doubtful straggler to the British Isles; Africa as far south as Damaraland, and occasionally to the Cape Colony in winter; Asia Minor and Southern Asia east to China, and India in the winter.

In general habits it resembles *F. tinnunculus,* but is more gregarious, and feeds more generally on insects. It nests also frequently in large colonies, in old ruins, buildings such as church towers, &c., hollow trees, and sometimes in cliffs, making a very scanty nest, and in May deposits 4 to 5 or 6 eggs, which vary considerably but resemble those of *F. tinnunculus,* though they are more fox-red and lighter in colour, and smaller in size, averaging 1·44 by 1·11.

PANDION, Savigny, 1810.

775. OSPREY.

PANDION HALIAËTUS.

Pandion haliaëtus (Linn.), Syst. Nat. i. p. 129 (1766); (Naum.), i. p. 241, Taf. 16; Hewitson, i. p. 19, pl. vi.; Gould, B. of E. i. pl. 12; id. B. of Gt. Brit. i. pl. 12; Newton, i. p. 30; Sharpe, Cat. B. Br. Mus. i. p. 449; Dresser, vi. p. 139, pls. 386, 387; Ridgway, p. 255; Tacz. F. O. Sib. O. p. 52; Blanford, F. Brit. Ind. Birds, iii. p. 314; Saunders, p. 359; Lilford, i. p. 11, pl. 8; *P. carolinensis* (Gmel.), Syst. Nat. i. p. 263 (1788); *P. leucocephalus*, Gould, P.Z.S. 1837, p. 138.

Balbusard, French; *Aguia pesqueira*, Portug.; *Aguila pescador*, Span.; *Falco pescatore*, Ital.; *Fischadler*, German; *Visch-arend*, Dutch; *Fiskeörn*, Dan. and Norweg.; *Fiskljuse*, Swed.; *Kuollifalli*, *Tschiftschx*, Lapp.; *Kalasääski*, Finn.; *Skopà*, Russ.; *Bou-haut*, Moor.; *El Mansur*, *Ketaf*, Arab.; *Machariya*, *Machamanga*, Hindu.; *Misago*, Jap.

♂ *ad.* (Sweden). Head white, the crown striped with blackish brown, which forms almost a patch before and above the eye; nape feathers elongated, lanceolate, tipped with blackish brown and washed with yellowish; ear-coverts and a stripe to hind-neck blackish brown; upper parts dark brown, the back faintly glossed; quills blackish brown, marked with white on the basal part of the inner webs; tail dark brown, the outer feathers dull white on the inner webs and dark banded; under parts white, the breast faintly marked with pale and dull ochreous brown; outer toe reversible; under surface of toe rough, covered with small pointed scales; feathers wanting the accessory plumule; bill blackish horn; cere blue-grey; legs pale plumbeous; iris bright yellow. Culmen 1·9, wing 19·3, tail 8·7, tarsus 2·2 inch. Female similar but larger, and generally has the breast more marked with brown. The young bird has the head and neck more varied with blackish brown, the feathers on the upper parts and wings margined or tipped with white, the tail more conspicuously barred, and tipped with white, and the under parts washed with rufous isabelline.

Hab. Europe, north to Lapland, not breeding in Ireland; Asia, east to Japan; Africa, south to Natal; Australia; New Zealand; America from the high north, south to Brazil.

Frequents the vicinity of inland lakes and rivers, or the sea-coast, where it can obtain fish which swim near the surface of the water, for it feeds exclusively on fish, which it obtains by plunging down from a considerable altitude. Sometimes it strikes too large a fish, and I have seen one which on so doing was carried out to sea and drowned. Its call-note is a somewhat clear *kai, kai, kai*, or a harsh *krau*. It usually nests on trees, occasionally however on rocky islets or old buildings, and in some countries it nests in communities. The nest is a bulky structure of sticks, worked together with turf and roots, and lined with moss, and the eggs, generally 3, sometimes 4, in number, are deposited in April or May. These are richly blotched with dark chestnut-red surface-markings and a few purplish grey shell-spots or blurs, on a dull white, bluish white, or buffy white ground, and vary a good deal in size, but average 2·40 by 1·76. American eggs run a trifle larger, and are recognizable by their strong musky smell.

PHALACROCORAX, Brisson, 1760.

776. CORMORANT.

PHALACROCORAX CARBO.

Phalacrocorax carbo (Linn.), Syst. Nat. i. p. 216 (1766); (Naum.), xi. p. 52, Taf. 279; Hewitson, ii. p. 471, pl. cxxx. fig. 2; Gould, B. of E. v. pl. 407; id. B. of Gt. Brit. v. pl. 52; Dresser, vi. p. 151, pl. 388; David and Oust. Ois. Chine, p. 532; Audubon, B. Amer. vii. p. 123, pl. 415; Ridgway, p. 78; Grant, Cat. B. Br. Mus. xxvi. p. 340; Tacz. F. O. Sib. O. p. 1072; Blanf. F. Brit. Ind. Birds, iv. p. 340; Saunders, p. 361; Lilford, vii. p. 1, pl. i.; *P. sinensis* (Shaw and Nodder), Nat. Misc. xiii. pl. 529 (1801); *P. cormoranus* (Meyer and Wolf), Taschenb. ii. p. 576 (1810); (Naum.), xi. p. 52, Taf. 279; *P. carboides*, Gould, P.Z.S. 1837, p. 156; id. B. of. Austral. vii. pl. 66.

Grand Cormoran, French; *Corvo marinho*, Portug.; *Cuervo marino*, Span.; *Cormorano*, Ital.; *Kormoran-Scharbe*, German; *Aalscholver*, Dutch; *Skarv*, *Aalekraake*, Dan. and Norweg.; *Storskarf*, Swed; *Skarffa*, Lapp.; *Kalakorppa*, *Haikara*, Finn.; *Obiknovennui-Baklan*, Russ.; *Agag*, Arab.; *Gharrad*, Moor.; *Ghogur*, *Pan-kowa*, Hindu.; *U*, Jap.

♂ *ad.* (Scotland). Chin and sides of the head skirting the bare part at the base of the bill white; head, neck, and under parts glossy purplish black; nuchal feathers elongated; a few hair-like feathers on the neck white; upper parts bronze-green margined with blackish; the lower back and rump purplish black; quills and tail greyish black; a pure white patch on each thigh; bill yellowish white at the base, otherwise dusky brown; gular sac yellow; bare space round the eye greenish brown; iris grass-green; legs and feet black. Culmen 3·6, gape 4·1, wing 13·5, tail 7·0, tarsus 2·7 inch. Female similar but smaller, duller in colour with a smaller crest. In the winter the colours are duller and greener and the head and neck are covered with slender white filamentous plumelets. The young birds are dark brown above, dull white marked with brown below; bill dark brown above, pale brown below; iris brown.

Hab. Europe generally; Greenland; Iceland; Africa south to the Cape Colony; Asia north to Kamchatka, east to Japan, south to the Malay Peninsula; Australia; New Zealand and Chatham Islands.

Frequents both inland waters and the sea-coasts, but with us at least is most frequently to be met with on salt water. Its flight is direct and swift, though it appears somewhat clumsy in rising from the water, and strikes the water with its feet for some distance before it is fairly on the wing. It swims however with ease and dives even better, and trusts chiefly to its dexterity and speed under water to obtaining its food, for it feeds entirely on fish and is extremely voracious. On land it walks heavily and clumsily. Though naturally shy and wary it is easily tamed, and in China especially is trained to capture fish for its master.

It breeds on cliffs, rocks, or trees, usually in colonies, and when placed on a tree the nest is constructed of sticks lined with grass or weeds, or if on a rock, of a few sticks and seaweed. The eggs, usually 4 in number, are laid late in April or in May, and are elongate in shape, bluish white in colour closely incrusted with a layer of chalky substance, and in size average 2·30 by 1·51.

777. TEMMINCK'S CORMORANT.

PHALACROCORAX FILAMENTOSUS.

Phalacrocorax filamentosus (Temm. and Schlegel), Faun. Jap. Aves, p. 129 (1850); Grant, Cat. B. Br. Mus. xxvi. p. 350; *P. capillatus*, (Temm. and Schlegel), Faun. Jap. Aves, pls. 83 and 83B (1850); Tacz. F. O. Sib. O. p. 1075; Seebohm, B. Jap. Emp. p. 209.

♂ *ad.* (Japan). Differs from *P. carbo* in having the upper parts greenish bronze margined with dark green, the rest of the plumage oil-green in tinge, the head and neck dark greenish blue; the white patch bordering the gular pouch mottled with dark greenish black, the head and neck covered with long narrow white feathers. Culmen 2·7, wing 12·13, tail 5·8, tarsus 2·5 inch. After the breeding season the white feathers on the head and neck are cast. The young resemble those of *P. carbo*, but in all plumages this species may be distinguished by the shape of the bare space on the throat.

Hab. The coasts of eastern Siberia, Corea, Japan, and China.

In habits and nidification this species does not appear to differ from *P. carbo*.

778. RED-FACED CORMORANT.

PHALACROCORAX BICRISTATUS.

Phalacrocorax bicristatus, Pall. Zoogr. Ross. As. ii. p. 301, pl. lxxv. fig. 2 ; Seebohm, B. Jap. Emp. p. 211 ; Grant, Cat. B. Br. Mus. xxvi. p. 358 ; *P. urile* (Gmel.), Syst. Nat. i. pt. 2, p. 575 (1788 partim) ; Ridgway, p. 80 ; (Tacz.), F. O. Sib. O. p. 1078.

♂ *ad.* (Commander Island). Head dark greenish blue becoming steel-blue on the neck ; the lower neck, lower back, rump, upper tail-coverts and under parts deep oily bronze-green ; scapulars and sides of upper back rich greenish and violet-bronze with a purple tinge ; a tuft or crest on the crown and one on the nape bronze-green ; a white patch on each flank. In the breeding season the neck and rump are covered with scattered straw-yellow filamentous feathers ; feathers of forehead separated from the base of the culmen by a strip of bare skin connecting the naked lores ; gular pouch blue bordered behind by purplish red corrugations ; lores, orbits, and naked frontal skin bright orange. Culmen 2·25, wing 10·5, tail 6·3, tarsus 2·15 inch. Female similar but rather smaller. The young bird is dusky brown with a faint purplish tinge, darker and more glossy on the upper parts.

Hab. The coasts of Kamchatka and eastern Siberia, the Prybilof, Aleutian, and Kurile Islands, in winter south to Japan.

In habits this Cormorant does not appear to differ from its allies, and its eggs resemble those of *P. carbo* and vary in size from 2·36 by 1·49 to 2·48 by 1·69.

779. PALLAS'S CORMORANT.

PHALACROCORAX PERSPICILLATUS.

Phalacrocorax perspicillatus, Pall. Zoogr. Ross. As. ii. p. 305 (1811) ; Gould, Zool. Voy. Sulph. p. 49, pl. xxxii. ; Grant, Cat. B. Br. Mus. xxvi. p. 357 ; Ridgway, p. 81 ; Stejn., Proc. U. S. Nat. Mus. 1883, p. 65.

Ad. Resembles *P. bicristatus* but is considerably larger, the crown and nape are bronze-purple, the general colour of the body less blue ; eye surrounded with a broad white ring of naked skin, the naked skin round the base of the bill and gular sac mixed red, white, and blue. Culmen 3·75, wing 13·5, tail 7·2, tarsus 2·8 inch.

Hab. Bering Island formerly, but is extinct since about 1852.

780. PELAGIC CORMORANT.

PHALACROCORAX PELAGICUS.

Phalacrocorax pelagicus, Pall. Zoogr. Ross. As. ii. p. 303, pl. lxxvi. (1811); David and Oust. Ois. Chine, p. 533; Seebohm, B. Jap. Emp. p. 210; Grant, Cat. B. Br. Mus. xxvi. p. 360; (Tacz.), F. O. Sib. O. p. 1080; *P. resplendens*, Aud. Orn. Biogr. v. p. 148, pl. 412, fig. 1 (1839).

Morskoi Uril, Russ.; *U-garasu*, Jap.

♂ *ad.* (N. W. America). Differs from *P. bicristatus* in having the feathers on the forehead extended to the base of the culmen; head and neck glossy violet-black, purplish towards the head, the lower neck tinged with steel-blue; rump and under parts dark silky green; scapulars and wing-coverts bottle-green tinged with bronzy purple; neck and rump ornamented with narrow white filamentous feathers; flanks with a white patch. After the breeding season the white filamentous feathers and the crests on the head and nape are cast; gular sac and naked lores dull brownish red. Culmen 1·85, wing 9·5, tail 6·3, tarsus 2·1 inch. Female similar but rather smaller. The young bird differs from *P. bicristatus* in having the back and scapulars glossed with dull green and not with purple.

Hab. Coasts of Kamchatka, Eastern Siberia south to Southern China; Japan; west coast of North America from Alaska to Western Mexico.

In habits and nidification this bird does not differ from *P. carbo.*

Mr. Ridgway divides this Cormorant into three subspecies, viz.: *P. pelagicus* from the coast of Kamchatka and the Aleutian Islands; south in winter to the Kuriles and northern Japan; *P. pelagicus robustus*, Ridgw., from the coast of Alaska, from Norton's Sound, south to Washington Territory; and *P. pelagicus resplendens* (Aud.) from the Pacific coast, from Washington Territory to Western Mexico (Mazatlan and Cape St. Lucas).

781. SHAG.

PHALACROCORAX GRACULUS.

Phalacrocorax graculus (Linn.), Syst. Nat. i. p. 217 (1766); (Naum.), xi. p. 88, Taf. 280; Gould, B. of Gt. Brit. v. pl. 53; Dresser, vi. p. 163, pl. 389; Grant, Cat. B. Br. Mus. xxvi. p. 364; Saunders, p. 363; Lilford, vii. p. 5, pl. 2; *P. cristatus* (Müller), Zool. Dan. Prodr. p. 18, No. 150 (1776); Hewitson, ii. p. 473, pl. cxxx. fig. 2; Gould, B. of E. v. pls. 410, 411; *P. desmaresti* (Payraudeau), Ann. Sc. Nat. 1826, p. 460; Grant, op. cit. xxvi. p. 368.

Cormoran-largup, French; *Corvo marinho da crista*, Portug.; *Marangone col ciuffo*, Ital.; *Krähenscharbe*, German; *Gekuifde Aalscholver*, Dutch; *Topskarv*, Dan.; *Kråkskarf*, Norweg.; *Toppskarf*, Swed.

♂ *ad.* (Scotland). General colour silky blackish green, the head and neck greener; back, scapulars, and wing-coverts paler and margined with velvety black; on the back of the crown a broad recurved crest; bill black, the nail yellowish brown, the basal portion and the bare portion of the chin yellowish marked with black; angle of mouth orange; bare space round the eye and legs black; a yellowish spot at the base of the bill; iris rich green. Gape 3·6, wing 9·9, tail 5·7, tarsus 2·4 inch. Female similar but smaller. After the breeding season the crest is cast. The young bird is brown with a greenish tinge above, and has the chin, throat, and middle of the abdomen white or whitish, the rest of the under parts brownish ash; bill dusky brown above, brownish flesh below; bare skin at the base of bill and round the eye dusky yellow; legs dusky brown. In this and all other members of the genus the nestling is blackish, covered with blackish down.

Hab. The coasts of Europe up into the Arctic Circle, but not far up the Baltic, or on the coasts of Finland; Iceland; the Færoes; Mediterranean, Black and Caspian Seas.

In habits it resembles the Cormorant but it frequents the sea-coasts and is but seldom to be met with on fresh water. It is gregarious in its habits and breeds in societies, placing its nest, which is a large structure of seaweed, &c., on a rock or a rocky ledge in a cave, and in June or July deposits 3 or 4, sometimes even more, bluish white eggs covered with a chalky coating, elongated in shape and rather smaller than those of *P. carbo.* By some authors the Mediterranean Shag (*P. desmaresti*) has been subspecifically separated, the young bird having the under parts whiter or nearly white, but I cannot endorse this view.

782. AFRICAN CORMORANT.

PHALACROCORAX AFRICANUS.

Phalacrocorax africanus (Gmel.), Syst. Nat. i. p. 577 (1788); Dresser, vi. p. 169. pl. 390; Grant, Cat. B. Br. Mus. xxvi. p. 407.

♂ *ad.* (Egypt). General colour glossy black with bottle-green reflections; forehead intermixed with white and furnished with a short crest; sides of back, scapulars, and wing-coverts grey and blackish grey broadly tipped with black; quills and tail black washed with grey; bill yellow, the ridge of the mandible brown; bare skin of the face bluish; iris carmine-red; legs black. Culmen 1·3, wing 7·5, tail 6·0, tarsus 1·5 inch. After the breeding season the head and neck are brown, the greyish feathers on the upper parts are margined with brownish white; chin and throat, breast and abdomen white; base of neck and chest brownish white.

Hab. Africa, from the Delta of the Nile to the Cape of Good Hope; Madagascar.

In habits it resembles *P. pygmæus.* It frequents inland waters—rivers, lakes, morasses, and even ponds, and is not to be met with on the sea-coasts. Its flight is strong and rapid, and it is an expert diver, feeding almost exclusively on fish, but frogs and even grasshoppers have been found in its stomach. Its nest is a scanty structure of sticks, which is placed on a bush, and it deposits 3 to 4 eggs which are bluish white covered with a layer of chalky substance and which measure about 1·80 by 1·22.

783. PYGMY CORMORANT.

PHALACROCORAX PYGMÆUS.

Phalacrocorax pygmæus (Pall.), Reise, ii. p. 712, Anhang (1773); (Naum.), xi. p. 112, Taf. 281; Gould, B. of E. v. pl. 409; Dresser, vi. p. 173, pl. 391; Grant, Cat. B. Br. Mus. xxvi. p. 405.

Cormoran pygmée, French; *Marangone minore*, Ital.; *Zwergscharbe,* German.

♂ *ad.* (Danube). Crown, nape, hind neck, and sides of same glossy reddish brown, the forehead darker and tinged with greenish black; middle of back, scapulars, wing-coverts, and inner secondaries blackish grey, margined with glossy black; wings and tail black; rest of plumage greenish black with white spots composed of bare shafted feathers with a terminal white tuft; bill, naked skin round the eyes and on the throat, and legs black; iris sea-green. Culmen 1·35, wing 8·0, tail 6·5, tarsus 1·3 inch. Female rather smaller and duller in colour. After the breeding season the throat is white, the brown on the neck extends to the breast, and the white spots are absent. The young bird has the chin white, the throat and breast brown, the rest of the under parts dull white intermixed with brown, the lower flanks and under tail-coverts black, the bill yellowish; legs black and iris brown.

Hab. Southern and south-eastern Europe, rare as far north as Poland; north Africa; western and central Asia as far east as Afghanistan.

In habits it resembles its congeners; it frequents inland lakes, rivers, and marshes in preference to the sea-coasts, is an expert diver and feeds on fish which it captures under water. It is gregarious and breeds in colonies, placing its scanty nest of sticks on bushes in swamps, and late in May it lays 3 to 5, seldom 6, eggs, which resemble those of *P. graculus* but are smoother in surface of shell and smaller, measuring about 1·75 by 1·20.

In India and Burma, south to Java and Borneo this species is replaced by *P. javanicus* (Horsf.), which differs in having the chin and neck black and not brown.

SULA, Brisson, 1760.

784. GANNET.

SULA BASSANA.

Sula bassana (Linn.), Syst. Nat. i. p. 217 (1766); (Naum.), xi. p. 14, Taf. 278; Hewitson, ii. p. 474, pl. cxxx. fig. 3; Gould, B. of E. v. pl. 412; id. B. of Gt. Brit. v. pl. 54; Dresser, vi. p. 181, pl. 392; Grant, Cat. B. Br. Mus. xxvi. p. 425; Ridgway, p. 76; Saunders, p. 365; Lilford, vii. p. 9, pl. 3.

Fou de Bassan, French; *Ganso-patola*, Portug.; *Alcatráz*, Span.; *Basstölpel*, German; *Ian van Gent*, Dutch; *Kuksuk*, Greenl.; *Hav-sule*, Icel., Dan., and Norweg.; *Hafsula*, Swed.

♂ *ad.* (Bass Rock). Entire plumage pure white, the head and neck tinged with warm isabelline; quills and tail black, the latter cuneate; bill pale livid blue; space round the eye blackish; iris yellow; legs greenish; webs brown. Culmen 4·8, wing 18·8, tail 8·3, tarsus 2·7 inch. The immature bird has the upper parts dark sooty brown closely spotted with white, the under parts whitish closely marked with sooty brown; wings and tail blackish brown; bill dark horn-brown. The nestling is at first naked and blackish, then covered with dark down.

Hab. Atlantic coasts of Greenland, Iceland, Great Britain, and Scandinavia, in winter south to North-west Africa; on the American coasts from the high north to the Gulf of Mexico.

Is wholly marine, not to say oceanic, in habits, only visiting certain islands for the purpose of breeding. In British waters there are Lundy in the British Channel, Grasholm on the south-west coast of Wales, the Bell Rock and Skelligs on south-west coast of Ireland, Ailsa in the Firth of Clyde, St. Kilda, North Barra on Sulisgeir, and the Stack on the north coast of Scotland, and the Bass Rock in the Firth of Forth. There is no station on the coasts of Norway, Orkney, or Shetland, and in the Færoes only on Myggenœs, on the Iceland coast the Westman Islands, Eldey and Grimsey. Formerly abundant in Newfoundland waters it has now but three stations there, of which the Great Bird Rock is chief. Notwithstanding its great power of flight, it is occasionally driven inland by storms. It feeds wholly on fish, which it takes by plunging with closed wings from a height, and never by diving from the surface as do the Cormorants. At its breeding stations the nests are usually placed so thickly as to cover all the available space. They are built of sea-weed, and but a single egg is laid, which is elliptical in shape, the surface dull and rough, and white in colour, usually marked with yellowish brown dirt, and measures about 3·12 by 2·2. The cry of the old bird is a hoarse *kurra, kurra*, or *grog, grog*, rapidly repeated, and that of the young bird a shrill squeak.

Sula piscator (Linn.) has, according to Dr. Finsch, been once obtained in Decastries Bay in Eastern Siberia.

PELECANUS, Linn., 1766.

785. Roseate Pelican.

PELECANUS ONOCROTALUS.

Pelecanus onocrotalus, Linn. Syst. Nat. i. p. 215 (1766); Naum. xi. p. 150, Taf. 282; Gould, B. of E. v. pl. 405; Dresser, vi. p. 193, pl. 393; Grant, Cat. B. Br. Mus. xxvi. p. 462; Blanf. F. Brit. Ind. Birds, iv. p. 334.

Pélican blanc, French; *Pelicano*, Portug. and Span.; *Pellicano* Ital.; *Pelikan, Kropfgans*, German; *Abu-djemel*, Arab.; *Rosovaya Baba*, Russ.; *Murgi-sæfit*, Pers.; *Berkasan*, Tartar.

♀ *ad.* (S.E. Europe). General colour white tinged with rose; occipital feathers elongated and pointed, forming a crest, and an elongated tuft on the lower neck, tinged with isabelline; primaries black; bill blue-grey with a pink line marked with red down the side; space round the eye, forehead, and sides of the frontal lump yellowish; feet and legs pink; iris rich red. Culmen 16·0, wing 28·6, tail 8·2, tarsus 5·4 inch. The male is similar but has little or no crest. The young bird has the upper parts dull creamy buff varied with greyish brown; rump dirty white; tail dull greyish; wings brown with greyish margins; under parts dirty white.

Hab. Southern and south-eastern Europe, rarely straying into central Europe; of doubtful occurrence in Denmark, and a rare straggler to Sweden and Finland; north Africa; Asia Minor and Asia east to northern India.

Frequents inland waters and large marshes where it breeds. It swims with ease, and its flight is easy. It feeds on fish which it captures by dipping its head and taking the fish in its pouch. and they often combine and drive the fish in a small bay. Its note is a deep loud cry. This bird breeds in societies in large marshes, constructing a nest of reeds, and in April or May, 2 or 3, rarely 4, eggs are laid, which are white, the surface chalky and rough and generally marked with blood. In size they measure about 3·5 by 2·32.

786. SUBSP. PELECANUS ROSEUS.

Pelecanus roseus, Gmel. Syst. Nat. i. p. 570 (1788); Grant, Cat. B. Br. Mus. xxvi. p. 466; Blanf. F. Brit. Ind. Birds, iv. p. 333; *P. javanicus*, Horsf. Trans. Linn. Soc. xiii. p. 197 (1822); *P. minor*, Rüpp. Mus. Senck. ii. p. 185 (1837).

Malaya Baba, Russ.

Ad. (India). Differs from *P. onocrotalus* in being smaller, in having a shorter bill, the forehead in being devoid of any swelling, and in having the tail composed of 22 feathers instead of 24 as in *P. onocrotalus*. Culmen 12·0, wing 24·0, tail 7·0, tarsus 4·5 inch.

Hab. Eastern Asia, and the Malay Archipelago, India; westward to south-eastern Europe and Africa.

This is a very doubtful subspecies, and in India, where both *P. roseus* and *P. onocrotalus* occur, intermediate examples are, according to Mr. Blanford, frequently to be met with.

787. DALMATIAN PELICAN.

PELECANUS CRISPUS.

Pelecanus crispus, Bruch. Isis, 1832, p. 1109; Naum. xi. p. 180, Taf. 283; Gould, B. of E. v. pl. 405; Dresser, vi. p. 199, pl. 394; Grant, Cat. B. Br. Mus. xxvi. p. 468; Blanf. F. Brit. Ind. Birds, iv. p. 335.

Pélican crépu, French; *Krausköpfiger Pelikan*, German; *Kudravaya Baba*, Russ.; *Lambér*, Pers.; *Kután*, Tartar.

Ad. (Cyprus). General colour silvery white with a greyish tinge; nuchal feathers elongated, soft, and curly; most of the feathers on the upper parts with black shafts; quills blackish brown, the inner secondaries margined with whitish; tail greyish white; feathers on lower throat and breast elongated; a patch on the lower throat yellowish; bill blue-grey marked laterally with red, pouch yellow; bare space round the eye flesh-coloured; iris greyish; legs lead-grey. Culmen 16·5, wing 28·0, tail 9·1, tarsus 4·5 inch. The female is similar but rather smaller. Young birds resemble those of *P. onocrotalus* in being brownish grey, but differ in having the feathers at the base of the bill coming to an even line across the forehead and not to a point; head crestless; pouch greyish.

Hab. Southern but chiefly south-eastern Europe; north Africa, rare in the west; Asia east to south-east, Mongolia, and China, visiting north-west India in winter.[1]

In habits and nidification it does not differ from *P. onocrotalus*, and its eggs are similar to those of that species.

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[1] Formerly inhabiting, and (as shown by remains of the young) breeding in England. Bones have been found in the peat of the Fens of the Bedford Level, and in considerable numbers at Glastonbury in Somerset.

ARDEA, Linn., 1766.

788. GREY HERON.

ARDEA CINEREA.

Ardea cinerea, Linn. Syst. Nat. i. p. 236 (1766); Naum. ix. p. 24, Taf. 220; Hewitson, ii. p. 269, pl. lxxiv. fig. 1; Gould, B. of E. iv. pl. 273; id. B. of Gt. Brit. iv. pl. 20; Dresser, vi. p. 207, pl. 395; Sharpe, Cat. B. Br. Mus. xxvi. p. 74; Tacz. F. O. Sib. O. p. 980; Blanford, F. Brit. Ind. Birds, iv. p. 382; Saunders, p. 367; Lilford, vii. p. 12, pl. 4.

Héron huppé, French; *Garça real*, Portug.; *Garza*, Span.; *Airone cenerino*, Ital.; *Grauer-Reiher*, German; *Blaauwe-Reiger*, Dutch; *Fiske-Hejre*, Dan.; *Hegre*, Norweg.; *Grå Häger*, Swed.; *Harmaa-haikara*, Finn.; *Tschepura, Seraja-Zapla*, Russ.; *Kuuk-Kaja*, Tartar; *Bou-auk*, Arab.; *Aishoush*, Moor.; *Nari, Anjan*, Hindu.; *Awo-sagi*, Jap.

♂ *ad.* (England). Crown white; sides of and hind-neck glossy black; nuchal feathers much elongated; upper throat white; neck ash-grey with a faint vinous tinge and marked with two or three lines of blue-black feathers; on the lower neck a bunch of elongated, pointed white feathers tinged with ash at the base; upper parts and tail ashy blue, the scapulars much elongated; middle of breast and under tail-coverts white; sides of breast and a broad stripe on the sides of the abdomen black; flanks ashy grey; primaries black; bill, bare space round the eye, and iris yellow; legs dark greenish grey; bare part of tibia and soles yellowish. Culmen 4·8, wing 17·7, tail 7·5, tarsus 5·5 inch. Female smaller with the elongated feathers shorter. The young bird has the elongated feathers much shorter or wanting, the bunch of long feathers on the breast absent, and the under parts grey. The young in down is covered with long, soft down, grey above and white below; bill reddish white; iris white; legs reddish grey.

Hab. Europe generally, north to central Scandinavia, British Islands; Africa and Madagascar; Asia, east to Japan, south to the Malay islands and Australia; has strayed as far north as Iceland and Greenland.

Frequents streams, lakes, and ponds, where it can obtain its prey, which consists of fish, but it also captures water-rats, mice, and aquatic insects. In its general habits it is shy and wary. Its note is a deep harsh cry resembling the word *kronk*. It breeds rather early in the season, nesting in societies or heronries, occasionally on the ground, but more frequently on trees or cliffs, constructing a somewhat bulky nest of sticks, lined with twigs, grass, wool, hair, etc. The eggs are laid early in March, are pale blue with a few small white chalky marks here and there, and measure about 2·50 by 1·68.

789. PURPLE HERON.

ARDEA PURPUREA.

Ardea purpurea, Linn. Syst. Nat. i. p. 236 (1766); Naum. ix. p. 63, Taf. 221; Hewitson, ii. p. 271, pl. lxxiv. fig. 2; Gould, B. of E. iv. pl. 274; id. B. of Gt. Brit. iv. pl. 21; Dresser, vi. p. 217, pl. 396; (Sharpe), Cat. B. Br. Mus. xxvi. p. 60; Saunders, p. 369; Lilford, vii. p. 13, pl. 5.

Héron pourpré, French; *Garça*, Portug.; *Garza moruna*, Span.; *Airone rosso*, Ital.; *Purpur-Reiher*, German; *Roode-Reiger*, Dutch; *Purpurhejre*, Dan. and Norw.; *Purpurhäger*, Swed.; *Tschepura*, Russ.; *Kermesiwach*, Tartar; *Siad el mraj*, Moor.

♂ *ad.* (Spain). Differs from *A. cinerea* in having the crown black, the neck rusty reddish instead of ashy grey, the elongated scapular plumes intermixed with rusty red; quills and tail deep ashy plumbeous; elongated plumes on the lower neck striped with black; breast rich maroon red marked with black in the middle; flanks ashy grey; under tail-coverts black and white; soft parts as in *A. cinerea*. The female is duller and smaller. In winter the long plumes are absent. The young bird lacks the long plumes, has the crown rusty reddish, the upper parts greyish brown with broad yellowish rusty margins, and the under parts dull ochreous white, the flanks brownish ashy.

Hab. Europe, rarer in the north; of occasional occurrence in Southern Scandinavia and Great Britain; Madeira, the Canaries, and Cape de Verde Islands; Africa and Madagascar; Asia east to the Persian Gulf, being replaced further east by *A. manillensis*, Meyen, a closely allied form differing in lacking the black streaks on the fore-neck.

In habits it resembles the Bittern more than *A. cinerea*, in not frequenting open waters, but skulking among the dense aquatic herbage. It feeds chiefly on fish, but also on frogs, mice, and aquatic insects. Its call is not so loud or harsh as that of *A. cinerea*. Like that species it nests in societies, not on trees, but its nest, which is a mere platform of dry rushes or sticks, is placed among the aquatic herbage or on a bush. Its eggs, 3 or 4 in number, are deposited in April or early in May, and resemble those of *A. cinerea* but are smaller, measuring about 2·18 by 1·61.

790. BLACK-NECKED HERON.

ARDEA MELANOCEPHALA.

Ardea melanocephala, Vig. and Childr. in Denh. and Clapp. Voy. ii. App. p. 201 (1826); Dresser, vi. p. 225, pl. 397; Sharpe, Cat. B. Br. Mus. xxvi. p. 70; *A. atricollis*, Wagl. Syst. Av. *Ardea*, sp. 4 (1827).

Abu el Anga, Arabic.

♂ *ad.* (Africa). Differs from *A. cinerea* in having the head, pendant nuchal plumes and back of neck greyish black, the upper parts blackish plumbeous with a faint greenish lustre, the lower back, rump, and upper tail-coverts slaty blue, the elongated scapular plumes hoary towards the tips; quills and tail blackish lead grey; chin and throat white, neck blackish grey slightly marked with white; under parts clear grey; upper mandible black, the under mandible and bare skin round the eye greenish yellow; legs and feet black; iris light yellow. Culmen 3·0, wing 15·8, tail 6·2, tarsus 4·4 inch. Female smaller with the elongated plumes shorter. The young bird is duller and brownish grey; head black; hind-neck slaty grey; under parts yellowish white, the lower neck and breast greyish washed with fawn; throat striped with yellowish.

Hab. Africa south to the Cape Colony; Madagascar; a rare visitant to Algeria, Spain, and the south of France.

In habits it is said to resemble *A. cinerea*, and like that species it feeds on fish, but also on frogs, lizards, and locusts. It nests both on trees and on reed-beds in company with other Herons and those of the same species, and in June or July deposits 3 to 4 eggs, which resemble those of *A. cinerea* in colour, and measure about 2·32 by 1·72.

791. GREAT WHITE EGRET.

ARDEA ALBA.

Ardea alba, Linn. Syst. Nat. i. p. 239 (1766); Gould, B. of E. iv. pl. 276; id. B. of Gt. Brit. iv. pl. xxii.; Dresser, vi. p. 231, pl. 398; (Sharpe), Cat. B. Br. Mus. xxvi. p. 90; (Blanf.), F. Brit. Ind. Birds, iv. p. 385; Saunders, p. 371; Lilford, vii. p. 15, pl. 6; *A. egretta*, Bechst. Gemeinn. Naturg. Deutschl. iii. p. 41 (1793 nec. Gmel.); Naum. ix. p. 85, Taf. 222.

Héron aigrette, French; *Airone bianco maggiore*, Ital.; *Silber-Reiher*, German; *Groote Zilverreiger*, Dutch; *Hvit-Häger*, Swed.;

Belaya Tschepura, Russ.; *Akwach*, Tartar; *Gheti, Wag el abiad*, Arab.; *Mallang-bagla*, Hindu.

♂ *ad.* (Volga). Entire plumage pure white; feathers on the hind-crown and lower neck elongated and pointed; a large bunch of filiform hair-like plumes extends from the lower back beyond the tail; bill black; bare space round the eye greenish yellow; legs dark brown, the bare tibia paler; iris yellow. Culmen 5·6, wing 16·3, tail 6·6, tarsus 7·2 inch. Female similar but rather smaller. After the breeding season the elongate dorsal plumes are cast, and in the winter the bill is yellow. The young bird resembles the adult in winter but has the plumage laxer, the legs paler and tinged with yellow, and the bill much paler yellow.

Hab. Southern and south-eastern Europe, rarely straying as far north as Great Britain and Sweden; Africa as far south as Natal; Asia east to Burma, the Indian peninsula, and Ceylon.

In general habits this species resembles *A. cinerea*, and like that bird frequents rivers, streams, lakes, and large morasses, feeding on fish, frogs, aquatic insects, &c. It is companionable not only to others of its own species, but to allied species. Its call-note is a harsh deep *rah*, and that of the nestling *kekkekkek* like that of *A. cinerea*. It nests in societies, usually placing its nest on a tree, but sometimes amongst the dense reed-thickets. The nest is constructed of dry twigs, reeds, and flags, lined with finer leaves of aquatic plants, and the eggs, usually 4, but occasionally 5, in number, are deposited late in March or early in April, and are blue like those of *A. cinerea*, but smaller, measuring about 2·44 by 1·65.

792. SMALLER WHITE EGRET.

ARDEA INTERMEDIA.

Ardea intermedia, Wagler, Isis, 1829, p. 659; Dresser, vi. p. 238; (Sharpe), Cat. B. Br. Mus. xxvi. p.85; (Blanf.), F. Brit. Ind. Birds, iv. p. 386; Seebohm, B. Jap. Emp. p. 217.

Patangkha, Patokha-bagla, Hindu.; *Chiu-sagi*, Jap.

ad. (Japan). Differs from *H. alba* in being smaller, in having the dorsal summer plumes much longer; bill bright orange, in summer tipped with horn; facial skin green; legs and toes black; iris yellow. Culmen 2·9, wing 12·1, tail 5·2, tarsus 4·5 inch.

Hab. The Indian peninsula and Ceylon; Northern Burma; China, Japan, south to the Malay Peninsula and Islands, Java and the Philippines.

Is very closely allied to *H. alba*, from which it does not differ in general habits. In India it breeds in July and August, in colonies, placing its nest on trees, not unfrequently in towns. The eggs, 4 in number, resemble those of *H. alba* and measure about 1·9 by 1·44.

793. JAPANESE EGRET.

ARDEA TIMORIENSIS.

"*Ardea timoriensis*, Cuv." Lesson, Traité, p. 575 (1831); (Sharpe), Cat. B. Br. Mus. xxvi. p. 98; *H. syrmatophorus*, Gould, B. of Austral. vi. pl. 56 (1848); (Buller), B. N. Zeal. p. 226; *H. modesta*, Blakiston and Pryer, B. of Jap. in Trans. As. Soc. Jap. xi. part 1, p. 118 (nec. Gray); Tacz. F. O. Sib. O. p. 979; *H. alba*, David and Oust. Ois. Chine, p. 439 (nec. Linn.); (Seebohm), B. Jap. Emp. p. 216; (Tacz.), F. O. Sib. O. p. 977.

Paé-hao, Paé-lou-sse, Chin.; *O-sagi,* Jap.; *Kotuku,* New Zeal.

ad. (Japan). Differs from *H. alba* in having the dorsal plumes shorter, the bill orange-yellow both in summer and winter; naked space round the eye greenish yellow; legs above the knee pale dull yellow, this colour continued down the middle inner part of the tarsus; tarsi and feet otherwise black; iris yellow. Culmen 5·0, wing 16·4, tail 6·5, tarsus 6·2 inch.

Hab. Japan and China, south through the Malay archipelago to Australia and New Zealand.

In habits it does not differ from *H. alba*, and like that bird nests in colonies, placing its nest on trees, usually at a considerable height, and deposits 3 to 4 eggs, which are similar to those of *H. alba* in colour and measure about 2·2 by 1·6.

794. LITTLE EGRET.

ARDEA GARZETTA.

Ardea garzetta, Linn. i. p. 237, 1766; (Naum.), ix. p. 101, Taf. 223; Gould, B. of E. iv. pl. 277; id. B. of Gt. Brit. iv. pl. 23; Dresser, vi. p. 239, pl. 399; (David and Oust.), Ois. Chine, p. 440; (Sharpe), Cat. B. Br. Mus. xxvi. p. 118; (Blanf.), F. Brit. Ind. Birds, iii. p. 387; Saunders, p. 373; Lilford, vii. p. 19, pl. 7; Seebohm, B. Jap. Emp. p. 218.

Héron garzette, French; *Garza blanca,* Span.; *Garzetta,* Ital.; *Kleiner Silberreiher,* German; *Kleine Zilverreiger,* Dutch; *Tschepuranushda,* Russ.; *Beiadi,* Arab.; *Bou-fala, Bou-bliga,* Moor.; *Kilchia, Karchia-bagla,* Hindu.; *Siao-paé-hao,* Chin.; *Shira-sagi,* Jap.

♂ *ad.* (Spain). Entire plumage pure white; two long, narrow feathers form a plume from the nape; a large bunch of elongated recurved hair-like plumes extend from the lower back beyond the tail, and a bunch of elongated feathers slightly tinged with isabelline on the lower throat; bill black, but yellowish grey at the base of the lower mandible, bare space about the eye lead-blue; iris pale yellow; legs and feet black, soles yellow. Culmen 3·5, wing 11·0, tail 4·5, tarsus 4·4 inch. Female similar but somewhat smaller. In the winter the occipital and dorsal plumes are absent.

Hab. Southern Europe, straying rarely to northern continental Europe and Great Britain; Azores, Canaries, and Cape Verde Islands; Africa south to the Cape; Asia east to Japan, north to northern China, south to Ceylon, the Malay peninsula and the Philippines. *H. nigripes* from Java to Australia is scarcely separable from the present species, differing only in having no yellow on the feet.

In habits it does not differ from its allies and like them is very gregarious, frequenting large marshes, and feeding on fish, frogs, aquatic insects, worms, &c. It breeds in colonies, constructing its nest of dry twigs and reed-stems lined with finer leaves of aquatic plants, grass, and roots, and placing it on low trees, rush-beds, or on the ground, and late in May or early in June, usually 4 but occasionally 5 or 6 eggs are deposited, which are uniform pale greenish blue and measure about 1·76 by 1·26.

On the American continent the present species is replaced by *A. candidissima,* Gm. *Demiegretta sacra,* which inhabits the islands in the Bay of Bengal south to Australia and New Zealand and most of the Islands in the Pacific, is said to have strayed north to the islands in the Bay of Corea, but I cannot include it as a Palæarctic species.

795. Buff-backed Heron.

ARDEA IBIS.

Ardea ibis, Linn., Hasselq. Iter. p. 248 (1757); id. in Hasselq. Voy. etc. p. 198 (1766); *A. lucida*? (Rafin.); Caratteri, p. 5 (1810); (Sharpe), Cat. B. Br. Mus. xxvi. p. 213; *A. bubulcus,* Audouin, Expl. Somm. Pl. Ois. de l'Égypte, i. p. 298 (1825); Dresser, vi. p. 245, pl. 400, fig. 1; Saunders, p. 375; Lilford, vii. p. 23, pl. 8; *A. russata* (Wagler), Syst. Av. Ardea, p. 178, sp. 12 (1827, pt.); Gould, B. of E. iv. pl. 278; id. B. of Gt. Brit. iv. pl. 24.

Héron garde-bœuf, French; *Garciote,* Portug.; *Garrapatosa, Purga-bueyes,* Span.; *Airone guarda-buoi,* Ital.; *Zapla,* Russ.; *Abu-Gerdan,* Arab.; *Tair el bukkar,* Moor.

♂ *ad.* (Spain). Feathers on the head and nape elongated, hair-like, rich vinous buff; forepart of the back pale buffy yellow; a large bunch of hair-like rich vinous buff feathers extends from the back beyond the tail, and a similar shorter bunch covers the lower throat; rest of the plumage pure white; beak, legs, and iris yellow; bare space in front of the eye greenish yellow. Culmen 2·2, wing 9·7, tail 3·9, tarsus 3·2 inch. The female is rather smaller and has the ornamental plumes less developed. In winter these plumes are absent and the plumage is entirely white. The young bird resembles the adult in winter, but has the crown dull rufescent ochreous, and the back tinged with pale buff.

Hab. Southern Europe; has strayed at least once to Great Britain; Madeira and the Canaries; the whole of Africa and Madagascar; Asia east to Central Asia, east of which it is replaced by *A. coromandas.*

In habits it differs considerably from the true Egrets, as it affects the company of domestic cattle and evinces no fear of man. Nor does it feed on fish, but on various kinds of insects, especially grasshoppers and the insect parasites of cattle. Its call-note is said to resemble the bleat of a sheep, but is hollower and deeper in tone. It breeds in colonies in trees, building a somewhat large, flat nest of dry sticks and twigs, and in May deposits 2 to 4 eggs, which are uniform pale greenish blue in colour and measure about 1·80 by 1·30.

796. CATTLE-EGRET.

ARDEA COROMANDA.

Ardea coromanda (Bodd.), Tabl. Pl. Enl. p. 54 (1783); (Sharpe), Cat. B. Br. Mus. xxvi. p. 217; Seebohm, B. Jap. Emp. p. 219; Tacz. F. O. Sib. O. p. 985; (Blanf.), F. Brit. Ind. Birds, iv. p. 389.

Surkhia-bagla, Hindu.; *Ama-sagi,* Jap.

ad. (India). Differs from *A. ibis* in breeding-dress, in having the head, neck, throat, and pectoral plumes bright orange, the dorsal plumes vinous sienna tinged with golden yellow, and shorter than in *A. ibis,* scarcely extending beyond the tail. Culmen 2·2, wing 10·0, tail 3·75, tarsus 3·5 inch.

Hab. India, Ceylon, and Burma; Cochin China and China; the Ussuri country; Japan; Corea; south to the Philippines and Moluccas; is said to have occurred in Italy.

Differs but little from *A. ibis*, of which it is merely the eastern form; and in habits and nidification it does not differ from that species. In India it breeds from June to August, nesting in colonies in trees, and depositing 3 to 5 eggs, resembling those of *A. ibis* and measuring about 1·71 by 1·32.

797. Squacco Heron.

ARDEA RALLOIDES.

Ardea ralloides, Scop., Ann. i. Hist. Nat. p. 88 (1769); Dresser, vi. p. 251, pl. 400, fig. 2; (Sharpe), Cat. B. Br. Mus. xxvi. p. 202; Saunders, p. 377; Lilford, vii. p. 25, pl. 9; *A. comata*, Pall. Reise Russ. Reichs, ii. Anhang, p. 715 (1773); Naum., ix. p. 120, Taf. 224; Gould, B. of E. iv. pl. 275; id., B. of Gt. Brit. iv. pl. 25.

Héron Crabier, French; *Papa-ratos*, Portug.; *Garza cangrejera*, Span.; *Sgarza-ciuffeto*, Ital.; *Rallenreiher*, *Schopfreiher*, German; *Rareiger*, Dutch; *Kosmataya-zapla*, Russ.; *Sabisa*, Arab.; *Aishus*, Moor.

♂ *ad.* (Spain). Crown, nape, sides of the head and elongated nuchal plumes creamy white margined with black: dorsal plumes elongated, filamentous, coppery ochreous on the basal, and creamy buff on the terminal portion; wings, tail, chin, and upper throat white; lower throat and breast creamy yellow, the feathers elongated and filamentous; rest of under parts white; bare space round the eye greenish; bill pale lead at the base, blackish towards the point; iris rich yellow; legs greenish yellow. Culmen 2·62, wing 8·6, tail 3·5, tarsus 2·5 inch. The female has the nuchal plumes shorter, and is somewhat smaller. In the winter the nuchal and dorsal plumes are much less developed. The young bird has the nuchal feathers shorter and yellower, the dorsal feathers darker and coppery brown, the wings marked with yellowish buff, the lower throat striped with blackish, the bill greenish yellow, brown along the ridge; iris whitish yellow; legs yellowish green.

Hab. Southern Europe, east to the Caspian, straying rarely to central and northern continental Europe and Great Britain; Africa south to the Transvaal.

In its habits it somewhat reminds one of the Bitterns. It affects damp swampy localities, but is said to be met with in localities frequented by herds of domestic swine. Its note is a harsh *charr* but not loud, and as a rule it is a somewhat silent bird. It feeds on fish, frogs, aquatic insects, worms, and small shell-fish. It breeds in marshy places, nesting on the ground amongst the aquatic herbage or on bushes, and in May or June deposits 4 or 5 eggs, in colour greenish blue like those of *A. purpurea*, but measuring only about 1·55 by 1·19.

798. POND-HERON.

ARDEA GRAYI.

Ardea grayi, Sykes, P.Z.S. 1832, p. 158; Barnes, Stray Feathers, ix. p. 460; (Sharpe), Cat. B. Br. Mus. xxvi. p. 207; (Blanf.), F. Brit. Ind. Birds, iv. p. 393; *A. leucoptera*, Gray, List. Grall. Brit. Mus. p. 82 (1844).

Bagla, *Andha-bagla*, Hindu.; *Kana-koka*, Cingal.

ad. (India). Head and neck light yellowish brown, the crown browner, the occipital crest white, the dorsal plumes deep maroon tipped with blackish slate, the tips of the first primaries brownish, and the pectoral plumes ashy brown streaked with white; bill blue at the base, yellowish in the middle and edges, black at the tip; bare orbital skin greenish yellow; legs and feet dull green; iris bright yellow. Culmen 2·6, wing 8·5, tail 3·1, tarsus 2·2 inch.

Hab. India, Ceylon, and Burma, north to Afghanistan, west to the Persian Gulf, south-east to the Malay Peninsula; the Andaman, Nicobar, and Laccadive Islands.

Frequents paddy fields, ditches, banks and similar damp localities, and is a common and familiar bird in India. It feeds on frogs, crabs, fish, insects, &c., and nests in colonies, constructing a nest of sticks on a tree, and from May to September deposits 4 to 6 greenish blue eggs, which measure about 1·48 by 1·17.

799. CHINESE POND-HERON.

ARDEA BACCHUS.

Ardea bacchus, Bp. Consp. Gen. Av. ii. p. 127 (1855); (Sharpe), Cat. B. Br. Mus. xxvi. p. 211; (Blanf.), F. Brit. Ind. Birds, iv. p. 394; *A. prasinoscelis*, Swinh. Ibis, 1860, p. 64; David and Oust. Ois. Chine, p. 443; Seebohm, B. Jap. Emp. p. 225; *A. leucoptera*, (pt.) Gray, Gen. of B. iii. p. 566 (1847); Tacz. F. O. Sib. O. p. 984.

♂ *ad.* (China). Crown, sides of head and neck, and long nuchal crest bright chestnut, becoming maroon on the lower portions; chin and upper throat white; back and elongated dorsal plumes rich deep slate; feathers on lower breast elongated; rest of plumage, wings, and tail white; bill bluish at base, yellow in the middle, black towards the tip; bare orbital skin greenish yellow; legs pale yellowish green, soles and tibiæ pale yellow; iris golden yellow. Culmen 2·7, wing 8·5, tail 3·0, tarsus 2·2 inch. Female similar but rather smaller. In winter the head and neck are brownish streaked with yellowish buff, the upper breast white streaked with brown; back and scapulars brownish ash, the latter with pale yellowish shaft-stripes.

Hab. Mongolia, up to the Russian frontier; Manchuria; China; Burma; the Malay Peninsula; Borneo; the Andaman Islands; has once been obtained in Japan.

In habits and nidification it is said not to differ from *A. grayi.*

NYCTICORAX, Rafin., 1851.

800. NIGHT-HERON.

NYCTICORAX GRISEUS.

Nycticorax griseus (Linn.), Syst. Nat. i. p. 239 (1766); Dresser, vi. p. 269, pl. 402; Gould, B. of Gt. Brit. iv. pl. 26; Blanf. F. Brit. Ind. Birds, iv. p. 397; Saunders, p. 379; Lilford, vii. p. 32, pl. 11; *N. nycticorax* (Linn.), Syst. Nat. i. p. 235 (1766); (Naum.), ix. p. 139, Taf. 225; (Audubon), B. of Am. pl. 236; Sharpe, Cat. B. Br. Mus. xxvi. p. 146; Ridgway, p. 133; *N. europæus*, Steph. in Shaw's Gen. Zool. xi. p. 609 (1819); Gould, B. of E. iv. p. 279.

Héron bihoreau, French; *Goraz*, Portug.; *Garza gris, Garza de noche*, Span.; *Nitticora*, Ital.; *Nachtreiher*, German; *Kwak*, Dutch; *Kwakwa*, Russ.; *Kwak, Tar-bagla*, Hindu.; *Onă-dze*, Chinese; *Seguro-goi*, Jap.

♂ *ad.* (Malta). Forehead, a streak over the eye, cheeks, chin, throat, fore part of neck, breast, and abdomen white; crown, nape, back, and scapulars black glossed with bottle-green; several very long, white nuchal feathers; sides of and hind neck, wings, rump, tail, and flanks ashy dove-grey; bill blackish; lores and orbital space yellowish green; legs dull ochreous; iris deep red. Culmen 3·0, wing 11·4, tail 4·7, tarsus 3·05 inch. Female similar. In winter the long nuchal white feathers are wanting. The young bird is brown above, the crown and nape striped, the back and wing-coverts with triangular spots of buffy white; under parts white streaked with brown; quills and tail ashy brown tipped with white.

Hab. Central and southern Europe; straying to the British Islands, Denmark, and south Sweden, but has occurred as far north as the Færoes; Africa generally; Asia as far east generally as Japan, north to Manchuria, south to the Moluccas; America except in the high north; the Sandwich Islands.

Is chiefly nocturnal in its habits, during the day remaining hidden in some densely foliaged tree, and at the approach of dusk starting off in search of its food, which consists of fish, aquatic insects, worms, and crabs. Its flight is soft and noiseless like that of an owl, and its note is a harsh croak, *kwak*, which is seldom uttered except at night. It is as a rule a breeder on trees, constructing a flat nest of twigs and small branches lined with leaves of aquatic plants, rootlets, &c. Its eggs, 4 to 5 in number, are usually deposited in April or May, and are uniform pale greenish blue, glossless, and measure about 2·5 by 1·41.

GORSACHIUS, Bp., 1855.

801. JAPANESE NIGHT-HERON.

GORSACHIUS GOISAGI.

Gorsachius goisagi (Temm.), Pl. Col. pl. 582 (1836); Sharpe, Cat. B. Br. Mus. xxvi. p. 169; (Seebohm), B. Jap. Emp. p. 223.

Miso-goi, Jap.

♂ *ad.* (Japan). Upper parts deep foxy chestnut with a vinous coppery tinge on the middle of the crown, nape, hind neck, and of the back; most of the upper parts vermiculated with blackish; quills black tipped with chestnut; outer wing-coverts black tipped with white; tail blackish chestnut; chin and upper throat whitish with central black stripes; rest of under parts rufescent ochreous, vermiculated with blackish, and sparingly striped with black and white; axillaries black and rufous; bill green; culmen blackish; legs and feet green; iris yellow. Culmen 1·5, wing 10·1, tail 3·7, tarsus 2·5 inch. Sexes alike. The young bird has the back browner and more uniform, the wings boldly freckled with rufous buff.

Hab. Japan; Formosa and the Philippines in winter.

In habits it is chiefly nocturnal like the true Night-Herons, and remains hidden in the trees by day, feeding at night on fish, worms, crabs, &c. It frequents the forests, but nothing definite appears to be as yet known respecting its nesting habits. *G. melanolophus*, which inhabits the Malabar coast, Burma, the Philippines, &c., is a closely allied form, differing in having the tips of the quills edged with white and the axillaries black and white; the crown and long nuchal feathers are also slaty black.

ARDETTA, Gray, 1842.

802. LITTLE GREEN HERON.

ARDETTA JAVANICA.

Ardetta javanica (Horsf.), Trans. Linn. Soc. xiii. p. 190 (1821) ; (Sharpe), Cat. B. Br. Mus. xxvi. p. 177 ; (David and Oust.), Ois. Chine, p. 142 ; (Blanf.), F. Brit. Ind. Birds, iv. p. 395 ; (Tacz.), F. O. Sib. O. p. 986 ; (Seebohm), B. Jap. Emp. p. 224 ; *B.* var. *amurensis*, Schrenck, Reis. Amurl. i. p. 441 (1860) ; Sharpe, op. cit. xxvi. p. 181 ; *B. spodiogaster ;* Sharpe, Bull. B.O.C. iii. p. xvii. (1894) ; id. op. cit. xxvi. p. 182, pl. ii.

Kancha-bagla, Hindu.

♂ *ad.* (India). Crown, nape, and elongated occipital plumes black glossed with green or purplish ; a short black stripe from the base of the bill below the eye ; rest of neck and elongated dorsal plumes ashy bluish grey ; quills and tail slate-blue, the former with narrow white margins ; wing-coverts glossy greenish margined with buffy white ; chin, throat, and a streak bordering the lower mandible, white ; under parts ashy grey, whiter in the middle of abdomen ; bill above black, below greenish yellow ; facial skin green ; iris yellow ; legs green, front of tarsus and toes dusky, soles orange. Culmen 2·8, wing 7·4, tail 2·8, tarsus 1·85 inch. Sexes alike. The young has the crown blackish brown with a few whitish stripes, the upper parts brown with buff spots, and the under parts white streaked with brown. In a series from various localities there is a considerable variation in measurements.

Hab. The greater part of the Indo-Malayan area, north to the Amoor ; Manchuria ; North China and Japan.

In habits it is chiefly nocturnal, though less so than some of its allies, and may sometimes be seen in the daytime in search of food in shady places, but as a rule it remains concealed during the day and seeks its food by night, feeding on fish, frogs, crabs, &c. In India it breeds from May to August, placing a small nest, constructed of sticks, on a tree, and deposits 3 to 5 pale sea-green eggs, which measure about 1·62 by 1·21.

803. LITTLE BITTERN.

ARDETTA MINUTA.

Ardetta minuta (Linn.), Syst. Nat. i. p. 240 (1766) ; (Naum.), ix. p. 194, Taf. 227 ; (Hewitson), ii. p. 315, pl. lxxxiii. fig. 1 ; (Gould), B. of E. iv. pl. 282 ; (id.), B. of Gt. Brit. iv. pl. 29 ; Dresser, vi. p. 259, pl. 401 ; Sharpe, Cat. B. Br. Mus. xxvi. p. 222 ; Blanf. F. Brit. Ind. Birds, iv. p. 400 ; Saunders, p. 381 ; Lilford, vii. p. 33, pl. 12.

Héron blongios, French; *Garcenha*, Portug.; *Garza pequeña*, Span.; *Nonnotto*, *Guacco*, Ital.; *Zwergrohrdommel*, German; *Woudaapje*, Dutch; *Dværgheira*, Dan.; *Dverg-rördrum*, Swed.; *Zapla-woltschok*, Russ.

♂ *ad.* (Malta). Upper parts, including the head and tail, black glossed with greenish; sides of head and neck dull vinous grey; quills purplish black; wing-coverts ochreous, the larger tinged with dove-blue, under parts ochreous; the lower neck-feathers elongated; bill and legs greenish yellow; iris and bare part round the eye yellow. Culmen 2·1, wing 5·83, tail 2·4, tarsus 1·72 inch. The female is rather smaller, has the head brownish black, the sides of head and neck rufous; back and scapulars dark chestnut-brown margined with ochreous; quills dark brown; a patch of chestnut-red on the shoulder; chin white, with a central ochreous stripe; under parts streaked with white. Young birds resemble the female but have the upper parts more varied with buff, and the under parts streaked with deep brown.

Hab. Temperate Europe, straying to Scandinavia and the British Islands, and has however been recorded from the Færoes and Iceland; Madeira and the Azores; northern and central Africa in winter; Asia Minor and temperate Asia as far east as Northern India.

In habits it is shy and secretive and much resembles the Bittern. It frequents dense reed-beds and slips with ease through the densest thickets. Its flight is easy and swift, and the call-note of the male is a somewhat soft *bŭm*, *bŭm*, that of the female being *gett*, *gett*, *gett*. It feeds, chiefly by night, on small fish, frogs, and aquatic insects. Its nest is a clumsy structure of aquatic plants and twigs, lined with fine grass or flags, and is placed in the rushes well above the water, or sometimes on a bush. The eggs, 4 to 7 or even 9 in number, are usually deposited in May or June, and are dull white, with a bluish tinge when fresh, and measure about 1·37 by 1·05.

804. CHINESE LITTLE BITTERN.

ARDETTA SINENSIS.

Ardetta sinensis (Gmel.), Syst. Nat. i. p. 642 (1788); David and Oust. Ois. Chine, p. 448; Sharpe, Cat. B. Br. Mus. xxvi. p. 227; Blanf. F. Brit. Ind. Birds, iv. p. 401; (Seebohm), B. Jap. Emp. p. 27; Tacz. F. O. Sib. O. p. 988.

Jun-bagla, Hindu.; *Kat-bogla*, Beng.; *Yoshigoi*, Jap.

♂ *ad.* (Burma). Differs from *A. minuta* in having the crown and nape intermixed with grey; the hind-neck rufous; the back, scapulars, and inner secondaries yellowish brown, with a rufous tinge; quills and tail slaty black; bill dark brown above, pinkish brown below; facial skin green; iris yellow; tarsus dull flesh; toes and tibio-tarsal joint pale yellow. Culmen 2·75, wing 5·2, tail 1·9, tarsus 1·8 inch. The female differs from *A. minuta* in having the upper parts pale brownish rufous, the under parts with pale reddish stripes.

Hab. Japan; China; Burma; India and Ceylon; Malayana; New Guinea; North Australia; the Caroline, Marianne, Pelew, and Seychelle Islands.

In habits it does not differ from *A. minuta.* In India it breeds from May to August, and in Japan in June and July, depositing 4 to 6 eggs resembling those of *A. minuta*, and measuring about 1·3 by 0·95.

805. CHESTNUT BITTERN.

ARDETTA CINNAMOMEA.

Ardetta cinnamomea (Gmel.), Syst. Nat. i. p. 643 (1788); Gray and Hardw. Ill. Ind. Zool. i. pl. 66, fig. 1; Blanf. F. Brit. Ind. Birds, iv. p. 402; David and Oust. Ois. Chine, p. 447; Sharpe, Cat. B. Br. Mus. xxvi. p. 236; (Schrenck), Reis. Amurl. Taf. xiv.

Lal-bagla, Hindu.; *Matti-korowaka*, Cingal.

♂ *ad.* (India). Upper parts generally pale chestnut-red, the wing-coverts paler; under parts tawny ochreous; a white stripe on each side of the throat; pectoral plumes elongated, the feathers underneath blackish brown with buff edges; bill dark brown above, yellow below; facial skin reddish purple; legs and feet yellowish green; soles and iris yellow. Culmen 2·1, wing 6·5, tail 1·8, tarsus 1·9 inch. The female has the crown and hind-neck chestnut-brown with a blackish tinge; upper parts chestnut-brown, spotted with buff; under parts ochreous, striped with chocolate brown; facial skin yellow.

Hab. India and Ceylon; Burma; the Amoor, Manchuria and China; south to the Andaman and Nicobar Islands.

In habits it does not differ from *A. minuta.* In India it breeds in June, July, and August, placing its nest, which is a mere pad of grass, on the ground in swampy places, but sometimes on a bush, and depositing 5 or 6 eggs which resemble those of *A. minuta*, and measure about 1·28 by 0·99.

806. Schrenck's Little Bittern.

ARDETTA EURYTHMA.

Ardetta eurythma, Swinh. Ibis, 1873, p. 74, pl. ii. ; David and Oust. Ois. Chine, p. 447, pl. 119 ; (Seebohm), B. Jap. Emp. p. 227 ; (Sharpe), Cat. B. Br. Mus. xxvi. p. 242 ; Tacz. F. O. Sib. O. p. 989 ; *A. cinnamomea* (nec. Gmel.), (Schrenck), Reis. Amurl. Taf. xiii. fig. 3 ; (Radde), Reis. im. Süd. Ost. Sib. ii. p. 344.

Yoshi-goi, Jap.

♂ *ad.* (Japan). Crown, hind-neck, back, scapulars, and inner secondaries rich dark chestnut, the crown darker and slightly washed with grey ; quills dull slaty grey ; wing-coverts buffy ochreous, the edge of the wing and the tail deep chestnut ; chin and throat white, tinged with isabelline, and with a dark central line ; rest of under parts creamy buff ; pectoral feathers elongated, and concealing feathers blackish, margined with ochreous ; bill blackish brown above, yellowish brown below ; orbital skin purplish flesh, tinged with green ; legs grass-green, yellow near the tarso-tibial joint, and on the soles ; iris straw colour. Culmen 2·0, wing 5·5, tail 1·65, tarsus 2·1 inch. The female differs in having the head, neck, and upper parts rich chocolate-red, spotted with creamy white, and the under parts isabelline, striped with warm chocolate-red and blackish brown.

Hab. Eastern Siberia (southern Dauria, the lower Amoor, the mouth of the Ussuri river, and the island of Askold) Japan ; China to Borneo and Celebes.

In general habits and nidification it does not differ from *A. cinnamomea*, with which it was confused by the earlier Siberian travellers. Its eggs from Dauria are described as being white, almost elliptical in shape, and measure about 1·30 by 1·06.

Ardetta sturmi (Wagl) which inhabits the greater part of Africa is said to have occurred in the Pyrenees, but I find no authentic instance of its occurrence within our limits except that of one individual at Laguna in the Canaries, and consequently do not include it.

BOTAURUS, Briss., 1760.

807. Bittern.

BOTAURUS STELLARIS.

Botaurus stellaris (Linn.), Syst. Nat. i. p. 239 ; (Naum.), ix. p. 159, Taf. 226 ; Hewitson, ii. p. 317, p. lxxxiv. figs. 1, 2 ; Gould, B. of E. iv. pl. 280 ; id. B. of Gt. Brit. iv. pl. 27 ; Dresser, vi. p. 281, pl. 403 ;

David and Oust. Ois. Chine, p. 446 ; Sharpe, Cat. B. Br. Mus. xxvi. p. 253 ; Tacz. F. O. Sib. O. p. 991 ; Blanf. F. Brit. Ind. Birds, iv. p. 405 ; Saunders, p. 383 ; Lilford, vii. p. 38, pl. 13 ; Seebohm, B. Jap. Emp. p. 226.

Grand Butor, French; *Gallinhola real,* Portug.; *Avetoro,* Span.; *Tarabuso,* Ital.; *Rohrdommel,* German; *Roerdomp,* Dutch; *Rördrum,* Norweg. and Dan.; *Rördrom,* Swed.; *Wyp,* Russ.; *Niv-goung, Baz,* Hindu.; *Sankano-goi,* Jap.

♂ *ad.* (Holland). Crown and nape black, the latter with warm ochreous tips ; upper parts generally warm ochreous buff, irregularly marked and barred with blackish ; quills and tail chestnut-red, the former barred, the latter blotched and marbled with black ; chin buffy white, with a dark brown median and a lateral stripe on each side from the base of the bill ; neck and breast-feathers elongated, the lateral ones yellowish buff, with blackish bars, the middle ones ochreous, with broad central rufous streaks marbled with blackish ; rest of under parts yellowish buff, streaked with blackish brown ; bill and legs greenish yellow, the latter greener ; iris yellow. Culmen 2·8, wing 11·7, tail 4·45, tarsus 3·5 inch. Female similar but rather smaller.

Hab. Europe generally, but rare in the northern portions, formerly breeding in many parts of England, but now only an uncertain visitor ; Northern Africa in winter ; Asia as far east as Japan, north to the Yenesei and Lena, south to Ceylon and southern China.

Frequents large swamps, and reed-beds, and is shy and secretive, and chiefly nocturnal in its habits. Its flight is soft and noiseless but somewhat laboured and seldom prolonged. Its usual call-note is a loud, clear croak, but in the breeding season the male utters the loud booming sound, resembling the deep bellowing of a bull, whence its name in so many languages is derived. It feeds on amphibians, water-insects, worms, crustaceans, and small mammals. Its nest is a mere bed of flags and reeds, placed on the ground or in the reed-beds in some secluded marsh, and the eggs, 3 to 5 in number, usually laid in May, are uniform brownish olive and measure about 2·5 by 1·52.

808. AMERICAN BITTERN.

BOTAURUS LENTIGINOSUS.

Botaurus lentiginosus (Montag.), Orn. Dict. Suppl. and pl. (1813) ; Gould, B. of E. iv. pl. 281 ; id. B. of Gt. Brit. iv. pl. 28 ; Dresser, vi. p. 289, pl. 404 ; Sharpe, Cat. B. Br. Mus. xxvi. p. 259 ; Ridgway, p. 126 ; Saunders, p. 385 ; Lilford, vii. p. 39, pl. 14 ; *B. minor* (Wils.), Amer. Orn. viii. p. 35, pl. lxv. fig. 3 (1814) ; Audub. B Am. pl. 337.

♂ *ad.* (New Brunswick). Differs from *B. stellaris* in being generally smaller, in having a more slender bill, the crown and nape reddish brown marked with blackish brown, the primaries uniform blackish brown, some slightly tipped with chestnut, and the upper parts are more finely vermiculated. Culmen 3·22, wing 11·5, tail 4·5, tarsus 3·85. Female duller and smaller.

Hab. The whole of temperate and tropical North America, south to Guatemala, Cuba, Jamaica, and Bermudas; a not uncommon straggler to the British Islands, and has not been obtained elsewhere in Europe.

In general habits and nidification it resembles *B. stellaris*, but its note in the breeding season differs from the boom of our bird and resembles the stroke of a mallet on a stake, and its usual note is a rough guttural *quark*, but it is as a rule a silent bird. Its eggs resemble those of *B. stellaris*, but are as a rule smaller.

CICONIA, Briss., 1760.

809. WHITE STORK.

CICONIA ALBA.

Ciconia alba, Bechst. Naturg. Deutschl. iii. p. 48 (1793); Naum. ix. p. 231, Taf. 228; Hewitson, ii. p. 317, pl. lxxxiv. fig. 1; Gould, B. of E. iv. p. 283; id. B. of Gt. Brit. iv. pl. 30; Dresser, vi. p. 297, pl. 405; Sharpe, Cat. B. Br. Mus. xxvi. p. 299; Blanf. F. Brit. Ind. Birds, iv. p. 369; Saunders, p. 387; Lilford, vii. p. 41, pl. 15.

Cigogne, French; *Cegonha*, Portug.; *Cigueña*, Span.; *Cigogna*, Ital.; *Storch*, German; *Stork*, Dan. and Swed.; *Aist*, Russ.; *Leglek*, Tartar; *Badjah*, Arab.; *Lag-lag*, Hindu.

♂ *ad.* (Albania). Plumage pure white, except the quills, scapulars, and larger wing coverts which are glossy black; secondaries washed with grey on the outer web; bare skin round the eye black; chin naked and reddish, but black at the base of bill; beak and legs coral red; iris brown. Culmen 7·0, wing 22·5, tail 9·0, tarsus 8·9. Female similar but rather smaller.

Hab. Temperate and southern Europe, occurring rarely in southern Sweden, Finland, and Great Britain; wintering in Africa as far south as the Transvaal; Central and temperate Asia as far east as northern India.

In most parts where the Stork is found it is protected, being supposed by the peasantry to bring luck to the farm in which it builds. It feeds on frogs, insect-larvæ, rats, mice, snakes, fish,

&c. I have never heard Storks utter any cry, but during the breeding season they make a great clattering with their bills. They affect the vicinity of man greatly and usually build on a barn or house, making a huge nest of sticks lined with grass or any soft material, but they frequently build on trees. The eggs, 3 to 5 in number, are usually laid late in May, and are pure white, measuring about 3·15 by 2·17.

810. JAPANESE STORK.

CICONIA BOYCIANA.

Ciconia boyciana, Swinh. P.Z.S. 1873, p. 513; David and Oust. Ois. Chine, p. 450; Seebohm, B. Jap. Emp. p. 228; Sharpe, Cat. B. Br. Mus. xxvi. p. 302; Tacz. F. O. Sib. O. p. 973.

Ko-dzuru, Jap.

♂ *ad.* (Japan). Differs from *C. alba* in being larger, in having the beak black, not red, the eye-lids and bare skin round the eye vermilion red; the iris cream white, with a black exterior circle. Culmen 9·5, wing 26·0, tail 9·7, tarsus 11·0.

Hab. Eastern Siberia, Mongolia, Corea, and Japan; of doubtful occurrence in China.

In habits it does not appear to differ from *C. alba*, but is not so tame, and does not so much affect the vicinity of man. It nests in trees and lays white eggs, which resemble those of that species (*C. alba*), but measure 3·0 by 2·28.

811. BLACK STORK.

CICONIA NIGRA.

Ciconia nigra (Linn.), Syst. Nat. i. p. 235 (1766); Naum. ix. p. 279, Taf. 229; Hewitson, ii. p. 319, pl. lxxxiv. fig. 2; Gould, B. of E. iv. pl. 284; id. B. of Gt. Brit. iv. pl. 31; Dresser, vi. p. 309, pl. 406; David and Oust. Ois. Chine, p. 450; Sharpe, Cat. B. Br. Mus. xxvi. p. 303; Tacz. F. O. Sib. O. p. 975; Blanf. F. Brit. Ind. Birds, iv. p. 369; Saunders, p. 389; Lilford, vii. p. 45, pl. 16.

Cigogne noir, French; *Cegonha preta*, Portug.; *Cigueña negra*, Span.; *Cigogna nera*, Ital; *Schwarzer Storch*, German; *Sort Stork*, Dan.; *Svart Stork*, Swed.; *Tschernoï Aist*, Russ.; *Balazán*, Arab.; *Surmai*, Hindu.

♂ *ad.* (Brunswick). Head, neck, back, wings, and tail black with metallic gloss; lower breast and under parts white; beak, naked skin round the eye and legs orange red ; iris reddish brown. Culmen 7·4, wing 21·1, tail 9·5, tarsus 7·5 inch. Female similar. The young have the upper parts browner and duller, most of the feathers tipped with dull white.

Hab. Temperate and southern Europe, becoming rare in the north up to southern Sweden ; of rare occurrence in Great Britain; Africa, in winter as far south as the Cape Colony; Asia north to the Lena, east to Mongolia and China.

In habits it is less sociable than *C. alba* and does not affect the neighbourhood of man, but frequents marshes in or near forests, generally far from human habitations. It is also far more shy and is not seen in flocks, even during passage, but singly or in pairs. It feeds on frogs, amphibians, reptiles, small mammals, and to some extent on insects. It breeds in forests, making a smaller nest than that of *C. alba*, of sticks lined with grass and moss, or it occasionally utilizes the deserted nest of some other large bird, and it sometimes nests in a cave or on a cliff. The eggs, 3 to 5 in number, are usually deposited late in May or early in June, and are white, resembling those of *C. alba* except that when held up to the light the inside of the blown egg is yellowish green; in size they measure about 2·54 by 1·90.

PLATALEA, Linn., 1766.

812. SPOONBILL.

PLATALEA LEUCORODIA.

Platalea leucorodia, Linn. Syst. Nat. i. p. 231 (1766) ; Naum. ix. p. 312 ; Taf. 230 ; Hewitson, ii. p. 320, pl. lxxxv. ; Gould, B. of E. iv. pl. 286 ; id. B. of Gt. Brit. iv. pl. 32 ; (Dresser), vi. p. 319, pl. 407 ; Sharpe, Cat. B. Br. Mus. xxvi. p. 44 ; Blanf. F. Brit. Ind. Birds, iv. p. 366 ; Saunders, p. 393 ; Lilford, vii. p. 51, pl. 18 ; *P. major*, Temm. and Schlegel, Faun. Jap. Aves, p. 119, pl. lxxv. (1850) ; David and Oust. Ois. Chine, p. 451 ; Tacz. F. O. Sib. O. p. 970.

Spatule blanche, French ; *Colhereira*, Portug. ; *Espatula, Cuchareta*, Span. ; *Palettuni*, Ital. ; *Löffler*, German ; *Lepelaar*, Dutch ; *Skeeheira*, Dan. ; *Skegaas*, Norweg. ; *Skedstork*, Swed. ; *Kolpitza*, Russ. ; *Abu-Malaqah*, *Danás*, Arab. ; *Bou-kar-kaba*, Moor. ; *Chamach-buza*, Hindu. ; *Hiro-sagi*, Jap.

♂ *ad.* (Holland). Entire plumage pure white, except that the lower neck is buffy yellow nuchal feathers much elongated, forming a crest ;

bill black marked with dull yellowish, the plate yellow, marked on the upper part with black; loral space yellowish; bare gular space reddish yellow; legs and feet dusky blackish; iris red. Culmen 7·2, wing 15·0, tail 5·0, tarsus 5·0, bare part of tibia 3·5 inch. Female similar but with smaller crest. In the winter the crest is absent or nearly so.

Hab. Central and southern Europe, formerly breeding in England, but now of rare occurrence in Britain and southern Scandinavia; has strayed to the Færoes; Madeira, Canaries, and Azores; Africa, on the east side south to Zanzibar, being replaced in S. Africa by *P. tenuirostris*, Temm.; Asia east to China, north to southern Dauria; a rare straggler to Japan, where *P. minor* occurs in the extreme south.

The Spoonbill affects marshy localities, especially near the sea-coast, and is shy and wary in its general habits. Its flight somewhat resembles that of the Stork, and its note is said to be deep and Heron-like, but like the Stork it makes a clattering sound with its bill. Its food consists of amphibians, aquatic insects, &c. It breeds in communities, placing its nest on a tree or on a low bush, or else amongst the reeds. The nest is constructed of twigs, sticks, and flags, lined with small flags or rushes, and the eggs, 3 to 4 in number, are white, with the faintest blue tinge when fresh, sparsely spotted and blotched with pale red, and measure about 2·75 by 1·81. In Europe the breeding season is usually in May, but in India it varies from April to November according to latitude.

813. Black-faced Spoonbill.

PLATALEA MINOR.

Platalea minor, Temm. and Schlegel, Faun. Jap. Aves, p. 120, pl. 76; Sharpe, Cat. B. Br. Mus. xxvi. p. 50; Seebohm, B. Jap. Emp. p. 231.

♂ *ad.* Differs from *P. leucorodia* in being smaller, in having the bare forehead and bare portion to behind the eye and the upper throat black; a yellow spot in front of the eye; feathers on the upper throat extending in a point towards the chin.

Hab. Corea; Japan (near Nagasaki); China and Formosa.

In habits it does not appear to differ from *P. leucorodia*, but I find nothing on record respecting its nidification.

IBIS, Cuvier, 1817.

814. SACRED IBIS.

IBIS ÆTHIOPICA.

Ibis æthiopica (Lath.), Ind. Orn. ii. p. 706 (1790) ; Shelley, B. of Egypt, p. 261 ; Dresser, ix. p. 285, pl. 694 ; Sharpe, Cat. B. Br. Mus. xxvi. p. 4 ; *I. religiosa*, Cuv. Règne An. i. p. 483 (1817).

Naädje, *Abu-Quadum*, Arab. ; *Abu-Hannes*, Egypt ; *Schoorsteinveger*, Dutch in S. Africa.

♂ *ad.* (Transvaal). General plumage white except the tips of the primaries and outer secondaries, which are black, glossed with metallic green ; inner secondaries elongated, lax, on the basal portion bluish grey, and on the terminal portion black glossed with purple, forming a plume which covers the tail ; head and neck bare, dull black ; beak and legs black ; iris brown. Culmen 7·0, wing 15·4, tail 6·3, tarsus 4·0 inch. Female rather smaller, the plumes duller. The young bird has the head and neck covered with short black and white feathers.

Hab. Africa south to the Cape ; Algeria and Egypt rarely is said to have occurred in the Caucasus ; Southern Persia.

The Sacred Ibis is very cautious and wary and is generally to be seen in small companies. Its food consists of insects of various kinds, frogs, lizards, and snakes. Its call-note is said to be harsh, resembling that of *Ardea ibis.* It nests on trees, constructing a simple nest of coarse twigs lined with grass and a few feathers, and lays 3 to 4, seldom 5, eggs, which are white with a bluish tinge, sparingly marked with brown, and measure about 2·5 by 1·6.

815. WHITE IBIS.

IBIS MELANOCEPHALA.

Ibis melanocephala (Lath.), Ind. Orn. ii. p. 709 (1790) ; David and Oust. Ois. Chine, p. 452 ; Seebohm, B. Jap. Emp. p. 232 ; Sharpe, Cat. B. Br. Mus. xxvi. p. 7 ; Blanf. F. Brit. Ind. Birds, iv. p. 361 ; *I. propinqua*, Swinh. P.Z.S. 1870, p. 428 ; Blakist. and Pryer, B. Jap p. 117.

Munda, *Didhar*, Hindu. ; *Tatu-koka*, Cing. ; *Kaynsoti*, Burm. ; *Kuro-toki*, *Kama-sagi*, *Nabe-kaburi*, Jap.

♂ *ad.* Differs from *I. æthiopica* in breeding-dress in having the primaries white, sometimes edged or mottled with brown, and not tipped with black, having elongate white feathers round the base of the neck and plumes on the upper breast, and the elongated inner secondaries are grey, and not black; head and neck bluish black; bill black; legs glossy black; iris reddish brown; skin of wing blood-red. Culmen 6·4, wing 14·4, tail 5·0, tarsus 4·2 inch. Female similar. In winter the elongated pectoral plumes and those on the upper parts are wanting. The young bird has the head and neck feathered forward to the eyes, the head, except beneath, blackish grey, passing into white on the hind-neck.

Hab. India, Ceylon, Burma, China, Manchuria, Japan, (Yokohama, Tokio).

Like its allies it frequents marshy places, rivers, lakes, and large ponds, usually in flocks, feeding on mollusca, crustacea, aquatic insects, worms, etc. In Northern India the breeding season is from June to August, and in Ceylon from November to February, and it breeds in trees, sometimes singly and at others several pairs together, constructing a nest of sticks and twigs lined with finer twigs, and depositing 2 to 4 eggs, white, occasionally delicately spotted with pale yellowish brown, varying a good deal in size but averaging 2·54 by 1·7.

816. Japanese Ibis.

IBIS NIPPON.

Ibis nippon, Temm. Pl. Col. v. pl. 551 (1835); David and Oust. Ois. Chine, p. 453, pl. 116; Seebohm, B. Jap. Emp. p. 232; (Sharpe), Cat. B. Br. Mus. xxvi. p. 15; Tacz. F. O. Sib. O. p. 967; *I. nippon*, var. *sinensis*, David and Oust. Ois. Chine, p. 454, pl. 117.

Toki, Dau, Jap.

♂ *ad.* (Japan). General colour of plumage white, the wings, tail, and axillaries tinged with almond pink; feathers on the nape and hind-neck elongated, forming a crest; lores, forehead, and chin orange-vermilion; eyelid golden yellow; iris orange; bill black, mottled with red at the tip; nail yellow; legs, feet, and naked part of tibia light red. Culmen 6·1, wing 15·4, tail 6·2, tarsus 2·8 inch. Sexes alike. The young bird has the plumage grey, not white.

Hab. South-eastern Siberia, Manchuria; China, Formosa, and Hainan; Corea; Japan.

In its general habits it is said to be shy and wary, frequenting large marshes, damp localities, and the banks of streams and rivers. Its note is harsh, not unlike that of the Hooded Crow, but deeper and harsher. It nests in bushes and trees, but so far as I can ascertain its eggs are as yet unknown.

817. RED-CHEEKED IBIS.

IBIS EREMITA.

Ibis eremita (Linn.), Syst. Nat. i. p. 159 (1766); (Rothsch. and Hart.), Novit. Zool. iv. p. 371, pls. viii. ix. x. (1897); *Ibis comata*, Rüpp. Neue Wirbelth. Vögel. p. 49 (1835–40); Dresser, vi. p. 329, pl. 408; (Sharpe), Cat. B. Br. Mus. xxvi. p. 16; *I. calvus*, Levaill. jr. Expl. Scient. de l'Alg. pl. 12 (1850, nec. Bodd.).

Kel-ainak, Turk.

♂ *ad.* (Asia Minor). General plumage dark coppery green, the crown black; head and throat bare; feathers on the neck elongated, pointed, forming a ruff; lesser wing-coverts rich coppery purple; bill, naked throat, and head with the legs dull blood-red; iris fiery red. Culmen 5·2, wing 16·7, tail 8·5, tarsus 3·0 inch. The tips of the tail-feathers are abruptly acuminate. Sexes alike. The young bird is duller in colour, lacks the elongated feathers on the hind-neck, and the head and neck are covered with dirty white feathers, tinged with rusty brown.

Hab. In the 16th century this Ibis was a native of Switzerland, as stated by Gesner, but it now only inhabits Asia Minor, and North Africa south to Abyssinia.

Frequents rocky and desolate mountain ranges, where it feeds on insects of various kinds, snails, and reptiles. It nests in holes in the cliffs, generally in almost inaccessible places, and deposits bluish white eggs which measure about 2·52 by 1·74.

PLEGADIS, Kaup, 1829.

818. GLOSSY IBIS.

PLEGADIS FALCINELLUS.

Plegadis falcinellus (Linn.), Syst. Nat. i. p. 241 (1766); (Naum.), viii. p. 539, Taf. 219; (Hewitson), ii. p. 321, pl. lxxxvi.; Gould. B. of E. iv. pl. 301; id. B. of Gt. Brit. iv. pl. 47; Dresser, vi. p. 335, pl. 409; Audub. B. of Am. pl. 387; Sharpe, Cat. B. Br. Mus. xxvi. p. 29; Blanf. F. Brit. Ind. Birds, iv. p. 364; Saunders, p. 391; Lilford, vii. p. 47, pl. 17; *P. autumnalis*, Ridgw. p. 124.

Ibis falcinelle, French; *Maçarico preto*, Portug.; *Morito*, Span.; *Mignattaio*, Ital.; *Dunkelfarbige Sichler*, German; *Sort-Ibis*, Dan. and Norweg.; *Svart-Ibis*, Swed.; *Koravaika*, Russ.; *Maâzet el Mâ*, Arab; *Maiza*, Moor.; *Kawâri*, *Chota-buza*, Hindu.

♂ *ad.* (Spain). Forepart of head metallic greenish black, rest of head, neck, upper back, edge of shoulder and under parts rich deep copper-brown; back glossed with purple; rest of upper parts, wings and tail blackish, glossed with purple and green ; under tail-coverts purplish black ; bill blackish slate, at the base slate-grey ; legs blackish grey ; iris brown, Culmen 5·2, wing 11·5, tail 4·7, tarsus 4·0 inch. Female similar but a trifle smaller. In the winter the head and neck are blackish brown, finely streaked with white, and the young resemble the adult in winter dress, but are duller in colour, the copper-brown replaced by dull dark brown.

Hab. Central and southern Europe, straying rarely to southern Scandinavia and Great Britain, but has occurred in Iceland and the Færoes ; Africa south to Natal ; Central Asia and India east to Burma and probably China, south to Ceylon, Borneo, Java, Celebes, New Guinea, and Australia ; eastern United States south to Florida and Mexico.

Generally found in marshes or near water. It is as a rule a silent bird, only uttering a harsh note when flushed. Its food consists of aquatic insects, worms, crustacea, small frogs, etc. It breeds in large marshes in societies, making a flat nest of sticks, flags, etc., which is placed on the ground, on the dense aquatic plants, or on a tree, and deposits 3 or 4 rich greenish blue eggs, which measure about 1·95 by 1·41. In Europe the breeding season is in May, whereas in northern India it is in June, and in Ceylon between November and February.

PHŒNICOPTERUS, Briss., 1760.

819. Flamingo.

PHŒNICOPTERUS ROSEUS.

Phœnicopterus roseus, Pall. Zoogr. Ross. As. ii. p. 207 (1811) ; Gould, B. of E. pl. 287 ; Dresser, vi. p. 343, pl. 410 ; Salvadori, Cat. B. Br. Mus. xxvii. p. 12 ; Blanf. F. Brit. Ind. Birds, iv. p. 408 ; Saunders, pp. 395, 756 ; Lilford, vii. p. 54, pl. 19 ; *P. antiquorum*, Temm. Man. d'Orn. ii. p. 587 (1820) ; Naum. ix. p. 408, Taf. 233.

Flammant, French ; *Flamingo*, Portug. ; *Flamenco*, Span. ; *Fiammanti, Fenicottero*, Ital. ; *Rosenfarbiger Flamingo*, German ; *Krasnöi Gouss*, Russ. ; *Bog-háns, Rag-háns*, Hindu. ; *Kaj-i-surkh*, Persian.

♂ *ad.* (Spain). Plumage rosy-white, the tail deeper rose ; upper and lesser under wing-coverts and axillaries vermilion rose ; quills black ; legs, base of bill, and bare space round the eye flesh-pink ; feet webbed ; terminal portion of bill deep black ; iris pale yellow. Culmen 5·65, wing 16·7, tail 7·0, tarsus 12·4 inch. Female similar but slightly smaller. The young have the plumage white, tinged with rusty buff, especially on the upper neck ; wing-coverts chiefly brown ; quills brown ; axillaries rose-pink ; legs dull plumbeous.

Hab. Southern Europe, rarely straying to central Europe, but has occurred at least four times in Great Britain; Africa south to the Cape; Asia east to India, south to Ceylon; is said to have occurred once on the southern part of Lake Baikal.

The Flamingo frequents the sea-coasts and the borders of large fresh-water lakes, or of lagoons where the country is open and devoid of trees or bushes, and is usually seen in vast flocks wading in the shallow water, and working about in the soft bottom in search of its food, which consists of minute crustaceans, and it is said, also of vegetable matter. In its cry, formation of flight, and structure, it most nearly resembles the Goose, and it swims also with ease. It breeds in colonies, making a small hillock of mud in the shallow water, varying from a few inches to a couple of feet in height, larger at the base, and tapering to the top, which is hollowed out cup-shaped, and late in May it deposits 2 eggs, which are white with a chalky surface, in size and shape resembling those of *Anser ferus*, but more elongated, measuring from 3·34 by 2·05 to 3·48 by 2·20. When sitting the bird doubles its long legs under its body.

ANSER, Briss., 1760.

820. Greylag-Goose.

ANSER FERUS.

Anser ferus, Schaeff. Mus. Orn. p. 67, No. 214 (1789); Gould, B. of E. v. pl. 347; id. B. of Gt. Brit. v. pl. 1; Hewitson, ii. p. 382, pl. cviii. fig. 2; Salvadori, Cat. B. Br. Mus. xxvii. p. 89; Blanf. F. Brit. Ind. Birds, iv. p. 416; *A. cinereus*, Meyer, Taschenb. ii. p. 552 (1810); Naum. xi. p. 229, Taf. 285; Dresser, vi. p. 355, pl. 411; Tacz. F. O. Sib. O. p. 1089; Saunders, p. 397; Lilford, vii. p. 55, pl. 20; "*A. rubrirostris*, Hodgs." Gray, Cat. Hodgs. Coll. B. M. p. 144 (1846); Salvadori, tom. cit. p. 91.

Oie cendrée, French; *Ganso*, Portug. and Span.; *Oca selvatica*, Ital.; *Graugans*, German; *Graauwe Gans*, Dutch; *Graagaas*, Dan. and Norweg.; *Grågås*, Swed.; *Iso-hanhi*, Finn.; *Seryi-Gus*, Russ.; *Sona*, Hindu.

♂ *ad.* (Scotland). Head, neck, and upper parts ashy brown, a narrow line of white on the forehead, the crown, back, and scapulars darker, the two latter with light brown edgings; primaries grey, with dark brown ends; secondaries dark brown; central wing-coverts like the back, the rest ashy blue-grey; rump ashy grey, the sides and tail-coverts white; tail ashy-brown, tipped with white; under parts dull white with a few black spots on the belly; the flanks ashy brown, tipped with ashy white; bill and legs flesh-coloured; nail and claws white; iris brown. Culmen 2·55, wing 18·0, tail 5·9, tarsus 3·3 inch. Sexes alike. Young rather duller in colour, with no black spots on the under parts.

Hab. Europe generally, from the North Cape to the Mediterranean; Britain, breeding commonly in the north of Scotland; Iceland, and the Færoes; North-west Africa in winter; Asia east to China, north to Dauria, south to northern India.

Is shy and cautious, and frequents open localities. On the wing it is strong, and swims and even dives, and walks with ease, and, when traversing long distances, flies in a wedge-shaped formation. It feeds on vegetable substances, tender shoots of grass, grain, etc., feeding chiefly at night. Its nest is placed on the ground and consists of grass, dried flags, etc., being lined, after the eggs are deposited, with abundance of down plucked by the female from off her breast. The eggs, which are deposited from early in April to the end of May or beginning of June, according to latitude, are glossless, but smooth in surface, dull yellowish white, with, when fresh laid, a very faint tinge of green, and measure about 3·52 by 2·28. In number they vary from 6 to 12.

Count Salvadori and several other authors separate the Asiatic bird (*A. rubrirostris*) from ours, but I agree with Mr. Blanford in not following this course.

821. BEAN GOOSE.

ANSER FABALIS.

Anser fabalis (Lath.), Gen. Synop. Suppl. i. p. 297 (1787); Salvadori Cat. B. Br. Mus. xxvii. p. 99; *A. segetum*, Gmel. Syst. Nat. i. p. 512 (1788), fig. 2; Naum. xi. p. 300, Taf. 287; Hewitson, ii. p. 385, pl. cviii. fig. 2; Gould, B. of E. v. pl. 348; id. B. of Gt. Brit. v. pl. 2; Dresser, vi. p. 363, pl. 412; Tacz. F. O. Sib. O. p. 1095; Saunders, p. 401; Lilford, vii. p. 61, pl. 22.

Oie vulgaire, French; *Ganso*, Portug. and Span.; *Oca granaiola*, Ital.; *Saatgans*, German; *Rietgans*, Dutch; *Sædgaas*, Dan. and Norweg.; *Sädgås*, Swed.; *Metsähanhi*, Finn.; *Guménnik*, *Nemock*, Russ.; *Hishikui*, Jap.

♂ *ad.* (England). Differs from *A. ferus* in being somewhat darker in colour, in lacking the black markings on the under parts, and the ashy blue on the wings, in being smaller in size, and in having the bill blackish, crossed by a broad orange yellow-band; the nail black; the legs orange-yellow. Culmen 2·35, wing 16·9, tail 5·7, tarsus 2·8 inch. Female similar but somewhat smaller. This species varies considerably in size in both sexes.

Hab. Europe generally, from Lapland and Novaya Zemlya down to North Africa in winter, and has occurred in Madeira; Asia east to western Siberia; does not occur in India.

In habits it does not differ from its allies, but it affects inland localities more especially, even when frequenting the coasts, flying far inland to feed. Its food consists of tender grass-shoots, grain, and tender roots of various kinds of grass, and it appears to feed chiefly at early dawn. It breeds like *A. ferus*, usually in damp localities, in the north of Sweden, Finland, and Russia, but not in Great Britain, depositing early in June 5 to 6 eggs, which resemble those of *A. ferus* but are smaller and somewhat smoother in texture of shell.

822. SUBSP. ANSER MIDDENDORFFI.

A. grandis, Midd. Sib. Reise, ii. p. 225, Tab. xx., fig. 1 (1851 nec. Gmel.); *A. middendorffi*, Severtzoff, Turk. Jevot. pp. 70, 149 (1873); Tacz. F. O. Sib. O. p. 1098; Salvadori, Cat. B. Br. Mus. xxvii. p. 102.

Hishikui, Jap.

♂ *ad.* (N. Siberia). Differs from *A. fabalis* in being larger, with conspicuously larger beak and feet, and in having the head and neck buffish brown. Culmen 3·15, wing 19·8, tail 5·67, tarsus 3·31.

Hab. Eastern Siberia, wintering in China and Japan. Does not differ from *A. fabalis* in habits or nidification.

823. PINK-FOOTED GOOSE.

ANSER BRACHYRHYNCHUS.

Anser brachyrhynchus, Baill. Mem. Soc. R. d'Abbev. 1833, p. 74; Hewitson, ii. p. 386, pl. cviii. fig. 1; Gould, B. of Gt. Brit. v. pl. 31; Dresser, vi. p. p. 369, pl. 413; Salvadori, Cat. B. Br. Mus. xxvii. p. 103; Blanf. F. Brit. Ind. Birds, iv. p. 418; Saunders, p. 403; Lilford, vii. p. 63, pl. 23.

Kleine Rietgans, Dutch; *Spetsbergens Sädgås*, Swed.

ad. (England). Differs from *A. segetum* in being smaller, having a shorter bill, and the legs, feet, and central portion of the bill pink. Culmen 1·75, wing 16·0, tail 5·6, tarsus 2·25 inch.

Hab. Spitsbergen, where it breeds, and is also said to breed in North Iceland; in the autumn and winter south to Britain, France, Germany, and Scandinavia; of very doubtful occurrence in India; has also been recorded, in error it would seem, from Japan.

In habits it differs but little from *A. ferus*, and is generally met with on or near the sea coast. Its nest is placed in some grass-covered place, near a river, or on a cliff, always where the bird can have a good view of the surrounding country. It deposits early in July 4 to 5 eggs, which resemble those of *A. ferus* but measure only 3·33 by 2·26.

824. White-fronted Goose.

ANSER ALBIFRONS.

Anser albifrons (Scop.), Ana. i. Hist. Nat. p. 69 (1769); Naum. xi. p. 351, Taf. 289; Hewitson, ii. p. 387, pl. cix. fig. 3; Gould, B. of E. v. pl. 349; id. B. of Gt. Brit. v. pl. 4; Dresser, vi. p. 375, pl. 414; Salvadori, Cat. B. Br. Mus. xxvii. p. 92; David and Oust. Ois. Chine, p. 492; Ridgway, p. 116; Blanf. F. Brit. Ind. Birds, iv. p. 417; Seebohm, B. Jap. Emp. p. 237; Saunders, p. 399; Lilford, vii. p. 60, pl. 21.

Oie rieuse, French; *Oca lombardella*, Ital.; *Blässengans, Lachgans*, German; *Kolgans*, Dutch; *Blisgaas*, Dan. and Norweg.; *Bläsgås*, Swed.; *Kazarka*, Russ.; *Kari-gane*, Jap.

♂ *ad.* (Scotland). Upper parts dark ashy brown, the wing-coverts ashy brown tipped with dirty white; a broad band covering the forehead extending nearly to the eye, and a smaller spot at the base of the lower mandible pure white; under parts white, the flanks ashy brown, the breast and abdomen boldly blotched with black; bill and legs orange-yellow, nail white; iris dark brown. Culmen 2·25, wing 17·0, tail 6·0, tarsus 2·65 inch. Female rather smaller, with the white on the forehead less developed. The young bird is duller, lacks the black on the under parts and has the white on the forehead considerably less developed.

Hab. Europe, from the north of Norway to the Mediterranean; rare in Finland, Greenland, and Iceland; North Africa in the winter; Asia east to Japan, north to Siberia, south in winter to Northern India; North America south in winter to Texas, Mexico, and Cuba.

Does not differ from its allies in its habits, but is said to prefer low, damp localities to the uplands. It feeds on vegetable matter, but is stated by some authors to eat, to some extent at least, insects. It breeds in the high north near water, not immediately on the coast, making a tolerably large nest which is placed on the ground, and deposits 4 to 6 yellowish white eggs, which measure about 3·06 by 2·2.

825. SUBSP. ANSER GAMBELI.

Anser gambeli, Hartl. Rev. and Mag. Zool. 1852, p. 7; Ridgway, p. 116; Tacz. F. O. Sib. O. p. 1091; Seebohm, B. Jap. Emp. p. 237; Salvadori, Cat. B. Br. Mus. xxvii. p. 95.

Karigane, Jap.

♂ *ad.* (N. America). Differs from *A. albifrons,* but is somewhat larger and has a larger bill; bill flesh-colour with a square figure on the culmen, the edges of nostrils, a small spot below them and the basal two-thirds of the lower half of the under mandible yellow; legs vivid cadmium-yellow; iris dark brown; naked eye-ring dark brownish grey. Culmen 2·35, wing 17·50, tail 6·20, tarsus 3·0.

Hab. North America, breeding far north; in winter south to Mexico and Cuba; the coasts of Eastern Siberia, Japan and China on passage and in winter.

826. LESSER WHITE-FRONTED GOOSE.

ANSER ERYTHROPUS.

Anser erythropus (Linn.), Syst. Nat. i. p. 197 (1766); Newton, P.Z.S. 1860, p. 341; David and Oust. Ois. Chine, p. 492; Dresser, vi. p. 383; Salvadori, Cat. B. Br. Mus. xxvii. p. 97; Tacz. F. O. Sib. O. p. 1093; Blanf. F. Brit. Ind. Birds, iv. p. 418; *A. temminckii,* Boie, Isis, 1822, p. 882; *A. minutus,* Naum. xi. p. 365, Taf. 290; Seebohm, B. Jap. Emp. p. 238.

Zwerggans, German; *Dwerggans,* Dutch; *Dværggaas,* Dan. and Norweg.; *Dverggås, Fjellgås,* Swed.; *Kiljuhanhi,* Finn.; *Piskun,* Russ.; *Ko-karigane,* Jap.

♂ *ad.* (Norway). Differs from *A. albifrons* in being darker and smaller, the bill smaller and the white on the forehead extending nearly to the centre of the crown; bill fleshy white, nail pale horn; legs and edge of eyelid orange-yellow. Culmen 1·5, wing 15·5, tail 5·0, tarsus 2·5 inch.

Hab. Northern Scandinavia, rare in the west and not found in Great Britain; rare in winter in central and southern Europe, and as far south as Egypt; Northern Asia, east to Japan, straying, though rarely, south to India in winter.

In habits it resembles *A. albifrons.* It breeds in certain districts in Lapland, nesting on the ground under bushes near water, and in June deposits 6 to 8 dirty yellowish white eggs, which measure about 2·91 by 2·0.

827. BAR-HEADED GOOSE.

ANSER INDICUS.

Anser indicus (Lath.), Ind. Orn. ii. p. 839 (1790); Salvadori, Cat. B. Br. Mus. xxvii. p. 105; Blanf. F. Brit. Ind. Birds, iv. p. 419; Tacz. F. O. Sib. O. p. 1087; *A. skorniakovi*, Severtz. Turk. Jevot. pp. 70, 149, pl. x. figs. 3, 4.

Kareyi-Háns, Hindu.

♂ *ad.* (India). Head and a long white band down each side of the neck white; two horseshoe-shaped black bars on the occiput and nape; rest of neck ashy brown; upper parts ashy grey with pale tips to the feathers, the mantle and scapulars tinged with brown; lower back and rump pure ashy grey; under parts whity brown, the sides of the breast browner, the feathers with pale tips forming bars; abdomen, flanks, upper and under tail-coverts white; quills and tail grey margined and tipped with white, the secondaries browner; bill yellow; legs orange; iris brown. Culmen 2·0, wing 18·0, tail 6·0, tarsus 3·0 inch. In the young bird the black bars on the nape are absent, the crown and nape are dark brown, the white neck-stripes are absent; back grey and under parts nearly white.

Hab. Turkestan; Mongolia; Tibet; north to Lake Baikal, wintering in India.

In habits it does not appear to differ from its allies, and in the autumn and winter is generally met with in small or large flocks, and feeds chiefly on grain, the feeding time being usually in the early morning and evening. It breeds in Mongolia and Tibet in May and June, but I find nothing on record respecting its nidification.

828. CHINESE GOOSE.

ANSER CYGNOIDES.

Anser cygnoides (Linn.), Syst. Nat. i. p. 108 (1766); Pall. Zoogr. Ross. As. ii. p. 218 and pl.; David and Oust. Ois. Chine, p. 493; (Salvadori), Cat. B. Br. Mus. xxvii. p. 107; Seebohm, B. Jap. Emp. p. 235.

Suchonos, Russ.; *Sakatsura-hishikui*, Jap.

♂ *ad.* (Siberia). Crown and band along the hind-neck dark brown; a narrow line round the base of the bill dull white; cheeks and neck whitish, along the front of the neck tinged with brown; upper parts greyish brown with pale margins to the feathers; quills grey; tail brownish grey with white margins; under parts buffy white, fading to white on the abdomen and under tail-coverts; breast-feathers with rusty margins; flanks brown with pale margins; bill black; legs orange; iris reddish brown. Culmen 3·5, wing 17·7, tail 7·1, tarsus 3·0 inch. Domestic birds of this species, and occasionally wild birds, have a large frontal knob on the bill, and the domestic bird has the bill red.

Hab. Eastern Siberia, from the Ob river to Kamchatka and the Kurile Islands, wintering in China, resident in Japan; Corea and Mongolia on passage; Manchuria.

Though it does not differ from the other Geese in its general habits it is said to affect the rivers in preference to the lakes, and breeds on the grassy steppes, the nest being a mere depression in the ground lined with a little dry herbage, and deposits 4 to 6 eggs, which are creamy white, rather smooth in texture of shell, and measure about 3·24 by 2·10.

BRANTA, Scop., 1769.

829. BRENT GOOSE.

BRANTA BERNICLA.

Branta bernicla (Linn.), Syst. Nat. i. p. 198 (1766); (Wils.), Am. Orn. viii. pl. 72, fig. 1; (Audub.), B. Am. vi. p. 203, pl. 379; Salvad. Cat. B. Br. Mus. xxvii. p. 119; Ridgway, p. 118; *B. torquata* (Naum.), xi. p. 393, Taf. 292 (nec. Gmel.); *B. brenta* (Tunst.), Orn. Brit. p. 4 (1771); (Gould), B. of E. v. pl. 352; (id.) B. of Gt. Brit. v. pl. 7; (Dresser), vi. p. 389, pl. 415, fig. 2; (Saunders), p. 411; (Lilford), vii. p. 69, pl. 26.

Bernache cravant, French; *Oca colombaccio,* Ital.; *Ringel-Gans,* German; *Rotgans,* Dutch; *Knortegaas,* Dan.; *Gaul, Ringgaas,* Norweg.; *Prutgås,* Swed.; *Kaulushanhi, Sepelhanhi,* Finn.; *Koku-gan,* Jap.

♂ *ad.* (England). Head, neck, upper back and breast black; sides of the neck marked with white; rest of back, scapulars, and wing-coverts dark brown margined with lighter brown; rump blackish brown, the sides and upper tail-coverts white; tail and quills blackish brown; under parts white, the upper parts indistinctly barred with pale ashy brown; flanks ashy brown with white margins; bill and legs black; iris dark brown. Culmen 1·5, wing 12·6, tail 4·2, tarsus 2·1 inch. Female similar. The young bird has the plumage duller than the adult.

Hab. The high north of Europe, Asia and Eastern North America, in winter migrating south to the British Islands, continental Europe, and sparingly to the Mediterranean; in Asia south to Japan; in America south to the Mississippi valley.

Is essentially a bird of the coast and is seldom found far from the sea. It feeds chiefly on vegetable matter but is also said to eat small shellfish and marine insects. It breeds in Spitsbergen, Greenland, and the north of Siberia, &c.; its nest, which is a bulky structure of grass and moss lined with down, is placed on the ground not far from the sea. The eggs usually 4 in number are creamy white, smooth in surface of shell and measure about 2·88 by 1·85.

830. BLACK BRANT.

BRANTA NIGRICANS.

Branta nigricans (Lawr.), Ann. Lyc. N. Y. iv. p. 171, pl. xii. (1846); (Seebohm), B. Jap. Emp. p. 240; Salvadori, Cat. B. Br. Mus. xxvii. p. 123; Ridgway, p. 118.

♂ *ad.* (N. America). Differs from *B. bernicla* in having a conspicuous white collar meeting in front and interrupted only behind, the upper part almost uniform sooty brown, and the abdomen almost as black as the breast. Culmen 1·30, wing 13·10, tail 3·7, tarsus 2·30 inch.

Hab. Western North America from the high north in summer to Lower California in winter; east coasts of Asia from Kamchatka, south in winter to Japan.

In general habits and nidification the present species does not differ from *Branta bernicla.*

831. HUTCHINS' GOOSE.

BRANTA HUTCHINSI.

Branta hutchinsi (Richardson), Faun. Bor. Am. ii. p. 470 (1831); (Audub.) B. Am. vi. p. 198, pl. 377; Salvadori, Cat. B. Br. Mus. xxvii. p. 114; Tacz. F. O. Sib. O. p. 1109; Ridgway, p. 117; (Seebohm), B. Jap. Emp. p. 239; *B. leucopareia* (Brandt) Bull. Sc. Acad. St. Petersb. i. p. 37 (1836).

Shi-jiu-kara-gan, Jap.

Ad. Head and neck black; chin, throat, and cheeks white; upper parts brown with paler margins, except on the back; rump black; under parts brown, the lower neck whitish, the vent and under tail-coverts pure white; bill and legs blackish plumbeous; iris dark brown. Culmen 2·3, wing 16·0, tail 5·5, tarsus 3·25 inch.

Hab. Arctic and subarctic America, in winter south to Mexico; Eastern Siberia, the Kurile and Commander Islands; Japan in winter.

In habits it does not differ from *B. bernicla*, and its nest and eggs also resemble those of that species, the latter measuring about 3·18 by 2·18.

832. BERNACLE GOOSE.

BRANTA LEUCOPSIS.

Branta leucopsis (Bechst.), Orn. Taschenb. ii. p. 424 (1803); (Naum.) xi. p. 378, Taf. 291; (Gould), B. of E. v. pl. 350; (id.), B. of Gt. Brit. v. pl. 7; (Dresser), vi. p. 397, pl. 415, fig. 1; Salvadori, Cat. B. Br. Mus. xxvii. p. 117; (Saunders), p. 409; (Lilford), vii. p. 69, pl. 26; Ridgway, p. 117.

Oie-bernache, French; *Weisswangengans,* German; *Brandgans,* Dutch; *Bramgaas,* Dan.; *Hvidkindet Gaas,* Norw.; *Hvitkindad Gås,* Swed.

Ad. (Holland). Hind-crown, lores, nape, hind-neck, breast, and upper back deep black; rest of the head and upper throat white; back-feathers with scapulars and wing-coverts bluish grey narrowly tipped with white and subterminally barred with black; rump black; the sides and tail-coverts white; quills and tail black; under parts white, the flanks indistinctly barred with greyish; bill and legs black; iris dark brown. Culmen 1·65, wing 15·8, tail 5·9, tarsus 2·85 inch.

Hab. Arctic Europe, in winter migrating south to the shores of the British Islands, Scandinavia, and northern continental Europe, rarely to southern Europe; as a straggler occurring on the Atlantic coasts of North America from Hudson's Bay to North Carolina.

In general habits it does not differ from the Brent Goose. It is during the summer a more boreal species and scarcely anything is known respecting its nidification, but it probably breeds in Greenland. I possess two eggs from the most northern of the Lofoten Islands, laid by a wounded bird, which in colour resemble those of *B. bernicla* but are rougher in texture of shell, and measure 2·64 by 1·82 and 2·62 by 1·76 respectively.

833. RED-BREASTED GOOSE

BRANTA RUFICOLLIS.

Branta ruficollis (Pallas), Spicil. Zool. fasc. vi. p. 21, Taf. iv. (1769); (Naum.) xi. p. 408, Taf. 293; (Gould), B. of E. v. pl. 351; (id.), B. of Gt. Brit. v. pl. 6; (Dresser), vi. p. 403, pl. 416; Salvadori, Cat. B. Br. Mus. xxvii. p. 124); Tacz. F. O. Sib. O. p. 1110; (Saunders), p. 407; Lilford, vii. p. 67, pl. 25.

Bernache à cou roux, French; *Rothhalsgans,* German; *Roodhalsgans,* Dutch; *Rödhalsad Gås,* Swed.; *Chakvoi,* Russ.

♂ *ad.* (Russia). Crown, nape, throat, forepart of cheeks, and a band encircling the eye black; loral patch, a spot below the eye, a stripe continued back, and another down on the neck pure white; auricular patch, the whole of the forepart of the chest, and the sides of the neck extending back and forming an interrupted collar rich chestnut-red ; a narrow band across the lower breast white ; back, rump, lower breast, and upper abdomen black ; lower abdomen, flanks, upper and under tail-coverts white ; quills and tail black ; bill and feet black ; iris dark brown. Culmen 1·0, wing 14·5, tail 6·0, tarsus 2·1 inch. Sexes alike. In the young bird the black is replaced by dark brown, the auricular patch is tinged with brown and varied with white, and the neck and breast are dull reddish buff.

Hab. Northern Siberia, migrating south in winter to Turkestan, the Caspian, and even as far as Egypt ; an accidental straggler to various parts of continental Europe and Great Britain.

In general habits it does not differ from its allies, and like them feeds on vegetable substances. Its eggs were first described and figured by von Middendorff in 1851, and in 1895 Mr. Popham took four nests on the Yenesei River which contained from 7 to 9 eggs, creamy white in colour, and measuring 2·79 by 1·93. The nests were placed at the foot of a cliff, and well supplied with down.

CHEN, Boie, 1822.

834. Snow Goose.

CHEN HYPERBOREUS.

Chen hyperboreus, (Pallas), Spic. Zool. vi. p. 20 (1767) ; (Naum.), xi. p. 213, Taf. 381 ; (Gould), B. of E. v. pl. 346 ; Dresser, vi. p. 413, pl. 417, fig. 1 ; Salvadori, Cat. B. Br. Mus. xxvii. p. 84 ; Tacz. F. O. Sib. O. p. 1086 ; Saunders, p. 405 ; Lilford, vii. p. 66, pl. 24 ; Ridgway, p. 115 ; *C. albatus* (Cassin), Proc. Ac. Philad, 1856, p. 41 ; Dresser, vi. p. 409, pl. 417, fig. 2.

Bieloi Gus, Russ. ; *Hynka*, Kamchatk. ; *Haku-gan*, Jap.

Ad. (N. America). Entire plumage pure white, except that the primaries are dark ash-grey at the base, otherwise black, and the spurious wing ash-grey ; legs and beak red, tooth white ; iris brown. Culmen 2·50, wing 17·0, tail 6·0, tarsus 3·0 inch. The young bird is brownish grey above, with dark centres to the wing-coverts and dorsal feathers ; under parts greyish white ; bill blackish with a reddish tinge ; legs plumbeous tinged with yellowish red.

Hab. Arctic North America, in winter ranging south to the Gulf of Mexico ; of somewhat rare occurrence in Kamchatka and North-east Siberia, wintering in Japan ; a straggler to Britain, Holland, Germany, Scandinavia, and North Russia.

Is said to be wary and shy ; its flight is strong and steady, and on land it walks with ease. On the sea-shore it feeds on shell-fish, fry, and marine plants, but when inland chiefly on vegetable matter. It breeds in the high north of America, most numerously on the Arctic barren grounds, near lakes, the nest being a hollow in the ground well lined with down. The eggs, usually 5 in number, are white, and measure about 3·4 by 2·2.

Chen albescens is merely a small form of the present species, and is now not generally looked on as even subspecifically separable.

835. Emperor Goose.

CHEN CANAGICA.

Chen canagica (Sevastanoff), Nov. Act. Ac. St. Petersb. xiii. p. 346, pl. x. (1800); (Salvadori), Cat. B. Br. Mus. xxvii. p. 109; (Tacz.), F. O. Sib. O. p. 1112; Ridgway, p. 118; *C. pictus* (Pallas.), Zoogr. Ross. As. ii. p. 233, Tab. 67 (1811).

♂ *ad.* Head and hind-neck to the back white, the former often stained with reddish orange; throat and fore-neck dusky brownish; upper and under parts blue-grey, above boldly and below more obsoletely barred with black and white; basal half of the tail slate, the terminal half white, lower mandible dark horn with a white spot on each side of the branching rami; membrane about nares livid blue; rest of upper mandible pale purplish, with a fleshy white wash; edge of nail dark horn, rest of the nail horn-white; legs and feet bright orange-yellow; iris hazel. Culmen 1·55, wing 15·1, tail 5·0, tarsus 2·75 inch. The young has the markings less distinct and the head and neck dusky, the former speckled with white.

Hab. Alaska coasts chiefly about the shores of Norton Sound and valley of the Lower Yukon; the Chukchi Peninsula in North Siberia, Sitka, and Bering Island.

But little is on record respecting the habits of this Goose. On the Vega expedition several nests were found containing 4 to 6 eggs, which are described as being dirty white and measuring about 3·23 by 2·05.

CYGNUS, Bechst., 1803.

836. Mute Swan.

CYGNUS OLOR.

Cygnus olor (Gmel.), Syst. Nat. i. p. 502 (1788); Naum. xi. p. 442, Taf. 295; Gould, B. of Gt. Brit. v. pl. 8; Dresser, vi. p. 419, pl. 418; Salvadori, Cat. B. Br. Mus. xxvii. p. 35; Tacz. F. O. Sib. O. p. 1114; Blanf. F. Brit. Ind. Birds, iv. p. 413; Saunders, p. 417; Lilford, vii. p. 74, pl. 28; *C. mansuetus*, Salerne, Orn. &c. p. 404 (1767); Gould, B. of E. v. pl. 354; *C. immutabilis*, Yarr. P. Z. S. 1838, p. 19; Dresser, vi. p. 429, pl. 419, figs. 1, 2.

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Cygne, French; *Cysne*, Portug.; *Cisne*, Span.; *Cigno reale*, Ital.; *Höker Schwan*, German; *Zwaan*, Dutch; *Knubsvane*, Dan.; *Knötsvan*, Swed.; *Lebed-chipounn*, Russ.

♂ *ad.* (Norfolk). Entire plumage pure white, the head and neck frequently tinged with ferruginous; a large tubercle at the base of the bill, edges of the mandible and orifice of the nostrils black, the beak otherwise orange-red; legs and feet black; iris brown. Gape 3·65, wing 27·0, tail 10·0, tarsus 4·5 inch. Female rather smaller, with a smaller tubercle. The young bird is sooty brownish grey and the bill plumbeous.

Hab. Southern Sweden, Denmark, South-eastern Europe, Southern and Central Asia east, to Mongolia; in winter occasionally as far south as Northern India; a regular winter visitant to North Africa; in a semi-domesticated state it is found throughout Europe.

Though tame and familiar when in a semi-domesticated state the Swan, when wild, is extremely shy and wary. It frequents lakes and rivers, and the coasts chiefly in winter. It swims with ease and grace, but is heavy and clumsy on land. Its food consists of soft portions of aquatic plants, aquatic insects and their larvæ, to a small extent of fish, but it does not appear to eat fish-spawn, of which it has been accused. In a wild state when calling its young it utters a cry not unlike the barking of a small dog. Its nest is a large structure, usually placed on an islet, and its eggs, 5 to 8 in number, are generally deposited in May, and are greenish grey in colour, rather rough in texture of shell and measure about 4·41 by 3·3. It would appear that *C. immutabilis* is merely a variety of the present species.

837. WHOOPER SWAN.

CYGNUS MUSICUS.

Cygnus musicus, Bechst. Gemeinn. Naturg. Vög. Deutschl. iii. p. 830 Taf. 35 (1809); Dresser, vi. p. 433, pl. 419, fig. 4; Salvadori, Cat. B. Br. Mus. xxvii. p. 26; Blanf. F. Brit. Ind. Birds, iv. p. 414; Saunders, p. 413; Lilford, vii. p. 75, pl. 29; *Cygnus ferus*, Leach, Syst. Cat. M. and B. Br. Mus. p. 37 (1816); Gould, B. of E. v. pl. 355; id. B. of Gt. Brit. v. pl. 9; Hewitson, ii. p. 393, pl. cxi. fig. 2; David and Oust. Ois. Chine, p. 493; Tacz. F. O. Sib. O. p. 1115; *C. xanthorhinus*, Naum. xi. p. 478, Taf. 296 (1842).

Cygne Sauvage, French; *Cisne*, Span.; *Cigno selvatico*, Ital.; *Wildschwan*, German; *Wilde Zwaan*, Dutch; *Sangsvane*, Dan.

and Norweg.; *Sångsvan*, Swed.; *Njukca*, Lapp.; *Joutsen*, Finn.; *Lebed-krikounn*, Russ.; *Ō-haku-chō*, Jap.

♂ *ad.* (Norfolk). Differs from *C. olor* in lacking the frontal tubercle, in having the base of the bill beyond the opening of the nostrils and the bare loral space yellow, the rest of the bill black; legs blackish; iris dark brown. Gape 3·95, wing 23·2, tail 8·9, tarsus 4·3 inch. The young bird resembles that of *C. olor*, but has the bill dull flesh colour, the tip and lateral margins black, and the legs dull flesh colour.

Hab. Iceland, Lapland, and the northern regions of Europe and Asia, migrating in winter south to the Mediterranean, Central Asia, China, and Japan; has once occurred in India.

In habits the Whooper does not differ much from the Mute Swan. It is however by no means a silent bird, and its clear trumpet-like note may frequently be heard when flocks are passing. Its food is the same as that of *C. olor*, but it not unfrequently feeds on land like the Geese. It breeds in single pairs in the vast morasses in the north, building a large nest, and in May deposits 4 to 6, seldom 7, pale yellowish white eggs which measure about 4·6 by 2·87.

C. buccinator, Richardson, the American Whooper, which differs from *C. musicus* in having the bill deep black is said to have been once obtained in Suffolk.

838. BEWICK'S SWAN.

CYGNUS BEWICKI.

Cygnus bewicki, Yarrell, Tr. Lin. Soc. xvi. 2, p. 453 (1830); Hewitson, ii. p. 396, pl. cxi. fig. 1; Gould, B. of E. v. pl. 356; Dresser, vi. p. 441, pl. 419, fig. 3; Salvadori, Cat. B. Br. Mus. xxvii. p. 29; Saunders, p. 415; Lilford, vii. p. 79, pl. 30; Seebohm, B. Jap. Emp. p. 235; *C. minor*, Keyserl. and Blas. Wirbelth. Eur. p. 82 (1840); Gould, B. of Gt. Brit. v. pl. 10; David and Oust. Ois. Chine, p. 494; Tacz. F. O. Sib. O. p. 1118; *C. melanorhinus*, Naum. p. 497, Taf. 297 (1842).

Kleiner Schwan, German; *Kleine Zwaan*, Dutch; *Pibsvane*, Dan.; *Haku-cho*, Jap.

♂ *ad.* (English coast). Differs from *C. musicus* in being smaller, in having the base of the bill lemon-yellow, this colour not reaching to the nostril, the rest of the bill being black; legs black; iris brown; tail-feathers usually 20. Gape 3·4, wing 18·7, tail 7·0, tarsus 3·85 inch.

Hab. North-east Europe and Asia, in winter migrating south to Britain, Scandinavia, continental Europe, Mongolia, China, and Japan. In Europe it is a more eastern species than *C. musicus*, and does not breed further west than European Russia.

In habits it does not differ from its allies. It breeds in northern Russia and Siberia, its eggs being similar to those of *C. musicus*, but smaller, measuring only 3·3 by 2·4.

The American representative of this species *C. columbianus* (Ord) which has the bill deep black, with a patch of deep orange, is said to have occurred in Scotland, but on very doubtful evidence, and Dr. Stejneger obtained a young specimen on Bering Island in Eastern Siberia in 1882. *Cygnus davidi* Swinhoe (P. Z. S. 1870, p. 430) which is smaller than *C. bewicki*, and has the beak and legs orange-red is said to have occurred in Mongolia, but I have not been able to examine a specimen, and have therefore not included it.

TADORNA, Fleming, 1822.

839. BURROW SHELDRAKE.

TADORNA CORNUTA.

Tadorna cornuta (S. G. Gmel.), Reis. Russl. ii. p. 185, Taf. 19 (1774); Dresser, vi. p. 451, pl. 420; Salvadori, Cat. B. Br. Mus. xxvii. p. 171; Blanf. F. Brit. Ind. Birds, iv. p. 427; Seebohm, B. Jap. Emp. p. 241; Saunders, p. 419; Lilford, vii. p. 83, pl. 32; *A. tadorna*, Linn. Syst. Nat. i. p. 195; Naum. xi. p. 534, Taf. 298; (Tacz.), F. O. Sib. O. p. 1124; *T. vulpanser*, Flem. Hist. Brit. Anim. p. 122 (1828); Hewitson, ii. p. 397, pl. cxii. fig. 1; Gould, B. of E. v. pl. 357; id. B. of Gt. Brit. v. pl. 11.

Le Tadorne, French; *Pato-tarro*, Span.; *Volpoca*, Ital.; *Bergente, Brandente*, German; *Bergeend*, Dutch; *Gravand*, Dan. and Norweg.; *Grafand*, Swed.; *Ristisorsa, Kivisorsa*, Finn.; *Pegannka*, Russ.; *Shâh-chakwa*, Hindu.; *Tsukushi-gamo*, Jap.

♂ *ad.* (Norway). Head and upper neck black glossed with bottle-green, the feathers on hind-crown and nape elongated; lower neck white; back and band across the breast fox-red; lower back, rump, upper tail-coverts, and under parts white; primaries and scapulars black; secondaries black on the inner and bottle-green on the outer webs, the elongated inner secondaries chestnut and white with a black stripe; a broad stripe of white all along the middle of the under parts; under tail-coverts orange-red; bill blood-red with a large fleshy knob at the base above; legs rich flesh-red; iris brown. Culmen 2·25, wing 13·0, tail 5·2, tarsus 2·05 inch. Female rather smaller and duller in colour and lacks the knob. In the young the black is replaced by dull dark brown, and the fox-red by rufous brown.

Hab. Europe generally, from the Lofoten islands to the Mediterranean, west to the British Islands; north Africa; Asia east to Japan, north to Mongolia, Manchuria, and southern Siberia, south to northern India and China in winter.

In general habits it resembles the Wild Duck a good deal, but is chiefly a coast bird, and is usually shy and wary. The call-note of the male is a deep *korr, korr,* but the note of the female is a quack. It feeds on vegetable matter, small crustaceans, and worms. It breeds in May in holes in the ground, usually rabbit-burrows, and deposits 7 to 12, sometimes as many as 16 eggs, which are well bedded in down, and are yellowish or ivory white, smooth in grain and measure about 2·7 by 1·8.

840. RUDDY SHELDRAKE.

TADORNA CASARCA.

Tadorna casarca (Linn.), Syst. Nat. iii. App. p. 224 (1768); Dresser, vi. p. 461, pl. 421; Saunders, p. 421; Lilford, vii. p. 81, pl. 31; *T. rutila*, Pall. Nov. Comm. Petrop. xiv. p. 579, Taf. 22, fig. 1; Naum. xi. p. 564, Taf. 299; Gould, B. of E. v. pl. 358; (id.), B. of Gt. Brit. v. pl. 12; Seebohm, B. Jap. Emp. p. 241; (Blanf.), F. Brit. Ind. Birds, iv. p. 428; (Salvadori), Cat. B. Br. Mus. xxvii. p. 117; (Tacz.), F. O. Sib. O. p. 1121.

Tadorne casarca, French; *Pato tarro,* Span.; *Rostente,* German; *Turpan,* Russ.; *Kermesi-Erdek,* Turk.; *Bou-ha,* Moor.; *Wuz Abu-Faroa,* Arab.; *Chakwa* ♂, *Chakwi* ♀, Hindu.;

♂ *ad.* (S. Russia). Head creamy yellow, becoming yellowish red on the neck, which is encircled below by a black ring; lower neck, back, breast, and under parts rich fox-red, paler on the flanks and scapulars; quills, tail, and tail-coverts black; rump yellowish red vermiculated with black; secondaries glossed with green and purple on the outer web; inner secondaries yellowish red tinged with ashy grey on the inner webs; wing-coverts white; bill and legs blackish; iris brown. Culmen 1·75, wing 14·0, tail 5·5, tarsus 2·5 inch. The female lacks the black collar and is whiter on the head, and the young bird resembles the female but is duller, the inner secondaries and scapulars are brown marked with yellowish red, and the white on the wing coverts is soiled with grey.

Hab. Southern and south-eastern Europe, rare in the west; of accidental occurrence in Britain, Sweden, Denmark, and Germany, etc; North Africa; Asia east through central Asia, Tibet, Mongolia, and Manchuria, to China, Corea, and Japan, north to Lake Baikal, south in winter to India, Burma, and Formosa.

In habits it is said to resemble the Geese more than the true Ducks, walks with ease like these, and grazes in the cornfields on tender shoots, feeding also on seeds, frogs, worms, and to some extent, is is said, on fish. Unless where unmolested, it is shy and wary. Its note is a peculiar clanging bisyllabic cry frequently uttered. It breeds, often far from the sea, in holes and clefts of the rocks, hollow trees and deserted nests of birds of prey, depositing about the end of May, 12 to 16 eggs which are well bedded in down and resemble those of *T. cornuta*, but are as a rule a trifle smaller.

ÆX, Boie, 1828.

841. MANDARIN DUCK.

ÆX GALERICULATA.

Æx galericulata (Linn.), Syst. Nat. i. p. 206 (1766) ; (Seebohm), B. Jap. Emp. p. 248 ; Gould, B. of Asia, vii. pl. 69 ; David and Oust. Ois. Chine, p. 501 ; Salvadori, Cat. B. Br. Mus. xxvii. p. 76 ; Tacz. F. O. Sib. O. p. 1127 ; Ridgway, p. 99.

Oshi-dori, Jap.

♂ *ad.* (China). Forehead green, merging into purple on the crown ; occipital crest coppery red, becoming dark purple and green below ; some of the lateral crest-feathers, region round and behind the eye on the neck, white ; upper parts, wings, and rump glossy olivaceous ; primaries externally greyish white ; short secondaries glossy metallic blue tipped with white, the inner ones falcate on the outer web, glossy blue, the inner web broad fan-shaped, chestnut, margined with velvety blue-black ; chin and throat warm pale rufous, the latter with white stripes, the feathers much elongated ; upper breast and its sides purplish blue, the latter tipped with white ; rest of under parts white, the flanks warm rufous finely vermiculated with black ; tarsus and toes reddish yellow, the membranes blackish ; bill reddish brown, the nail bluish flesh-colour ; iris dark brown, the outer ring yellowish white. Culmen 1·3, wing 9·5, tail 4·5, tarsus 1·4 inch. The female has the upper parts brownish olive, the crown and hind-neck greyish ; nuchal feathers elongate ; feathers round the eye, and a long stripe behind the eye, white ; chin and throat white ; breast brownish, spotted with white ; rest of under parts white. In the summe plumage the male resembles the female but has the upper parts more glossed, and the spots on the breast reddish instead of white.

Hab. Eastern Siberia, Japan, Corea on passage; resident in central and southern China, Formosa.

Frequents rivers and lakes; nests in hollow trees like the American *Æx sponsa*, and deposits pale yellowish eggs, which measure about 2·08 by 1·57.

ANAS, Linn., 1766.

842. Wild Duck.

ANAS BOSCAS.

Anas boscas, Linn. Syst. Nat. i. p. 205 (1766); Naum. xi. p. 575, Taf. 300; Audubon, B. Am. vi. p. 236, pl. 385; Gould, B. of E. v. pl. 361; id. B. of Gt. Brit. v. pl. 15; Hewitson, ii. p. 407, pl. cxiii. fig. 3; Dresser, vi. p. 469, pl. 422; Salvadori, Cat. B. Br. Mus. xxvii. p. 189; Tacz. F. O. Sib. O. p. 1129; Blanf. F. Brit. Ind. Birds, iv. p. 435; Saunders, p. 423; Lilford, vii. p. 86, pl. 33; Ridgway, p. 91.

Canard sauvage, French; *Pato real*, Portug. and Span.; *Germano real*, Ital.; *Stockente*, German; *Wilde Aant*, Dutch; *Stokand*, Dan. and Norweg.; *Gräsand*, Swed.; *Stuora-vuojas*, *Selsinä*, Lapp.; *Sinisorsa*, Finn.; *Kräkushka*, Russ.; *Bat*, Arab.; *Zerok el ras*, Moor.; *Nilsir*, *Nir-rugi*, Hindu.; *Ma-gamo*, Jap.

♂ *ad.* (England). Head and neck deep glossy green, darker on the fore-crown; a white ring round the middle of the neck, interrupted behind; scapulars and fore-back grey, vermiculated with brown; middle of back dark brown with fulvous margins; rump and four central recurved tail-feathers purplish black; rest of tail and quills brownish grey with whitish margins, speculum on secondaries greenish purple margined above and below with white; forepart of breast deep chestnut-red; rest of under parts greyish white narrowly barred with brown; under tail-coverts purplish black; bill dull yellowish olive; legs and feet reddish orange; iris brown. Culmen 2·6, wing 10·5, tail 4·0, tarsus 1·85 inch. In the summer season a plumage resembling that of the female but darker is donned for about 10 to 12 weeks. The female is brown above, marked with buff, the sides of the head paler, the chin and throat plain brownish buff, the tail-feathers brown, straight, and the under parts buff marked with brown, the upper breast browner.

Hab. Europe, north to Lapland where it is rare, south to the Mediterranean; the Canaries, Madeira, and Azores; north Africa; Asia east to Japan, north to Kamchatka, south to central India; North America, south to Mexico.

Is a shy and wary bird, flies swiftly and with ease, and walks well. It feeds by night on seeds, roots, worms, mollusca, insects, and though more frequently to be found on freshwaters, it is occasionally to be met with on the sea-coast. It breeds from early in March to late in May, its nest, which is a somewhat scanty structure of twigs and grass, well lined with down, is usually placed on the ground near water, though sometimes in a hollow tree, or the deserted nest of some large bird. The eggs from 7 to 12 or even 15 are dull greenish grey, and measure about 2·29 by 1·61.

843. Ring-billed Duck.

ANAS ZONORHYNCHA.

Anas zonorhyncha, Swinhoe, Ibis, 1866, p. 394; David and Oust. Ois. Chine, p. 496; Seebohm, B. Jap. Emp. p. 243; Salvadori, Cat. B. Br. Mus. xxvii. p. 211; Tacz. F. O. Sib. O. p. 1133; *A. pœcilorhyncha*, Temm. and Schleg. Faun. Jap. Aves. p. 126, pl. 82 (nec. Forst).

Kari-gamo, Jap.

♂ *ad.* (Japan). Not unlike the female *A. boscas*, but has a superciliary stripe; sides of the head and throat whitish, the rump and upper tail-feathers uniform dark brown; lower neck and upper breast dull whitish buff with dusky centres to the feathers; lower breast and abdomen brown, the under tail-coverts blackish brown; speculum glossy blue with a greenish tinge; bill black with the apical portion, except the tip of the nail, yellow; legs and feet light bright red; iris yellowish brown. Culmen 2·2, wing 11·6, tail 4·8, tarsus 1·75 inch. Sexes alike.

Hab. Mongolia, Dauria, China, Corea, Japan, and the Kurile Islands.

In its habits it is said to resemble *A. boscas.* It breeds in South-east Mongolia, northern China and Japan in May or early in June, nesting on the ground, and depositing 5 to 6 eggs, which are ivory-white and measure about 2·13 by 1·55.

CHAULELASMUS, Gray apud Bp., 1838.

844. Gadwall.

CHAULELASMUS STREPERUS.

Chaulelasmus streperus (Linn.), Syst. Nat. i. p. 200 (1766); (Naum.), xi. p. 659. Taf. 302; figs. 1, 3; (Hewitson), ii. p. 402, pl. cxiii. fig. 1; (Gould), B. of E. v. pl. 366; id. B. of Gt. Brit. v. pl. 19; Dresser, vi. p. 487, pl. 424; David and Oust. Ois. Chine, p. 499; (Audubon), B. Am. vi. p. 254, pl. 388; Salvadori, Cat. B. Br. Mus. xxvii. p. 221; Tacz. F. O. Sib. O. p. 1154; Blanf. F. Brit. Ind. Birds, iv. p. 440; (Seebohm), B. Jap. Emp. p. 242; Saunders, p. 425; (Lilford), vii. p. 87, pl. 34; (Ridgway), p. 95.

Chipeau bruyant, French; *Frisada*, Portug.; *Trigali, Pato castellano*, Span.; *Canapiglia*. Ital.; *Schnatterente*, German; *Kraakeend*, Dutch; *Snadderand*, Dan.; *Snatterand*, Swed.;

Serucha, Russ.; *Samari*, Arab.; *Mila, Bhuar*, Hindu.; *Okayoshi*, Jap.

♂ *ad.* (Holland). Crown and nape dark reddish brown; head and neck dull brownish white all narrowly barred; back dark slaty with undulating white cross-bars; lower back, rump, and upper tail-coverts black; tail and quills ashy brown; alar patch white; larger wing-coverts black, median chestnut-red, the lesser grey marbled with sandy brown; elongated inner secondaries and scapulars dull light brown; breast and flanks blackish with transverse white lines; under tail-coverts jet black; bill blackish along the ridge of the upper mandible, otherwise dirty yellow; legs dirty yellow, webs blackish; iris dark brown. Culmen 1·9, wing 10·4, tail 4·0, tarsus 1·55 inch. The female has the crown and nape blackish brown finely striated with pale rufous; back, scapulars, rump, and upper tail-coverts blackish brown margined and marked with rufous; wing-coverts grey tipped with dull white, the larger marked with rufous; speculum white; chin and upper throat white; neck, breast, and flanks dark brown, the former margined with rufous, the last with rufous grey; middle of abdomen dull white; under tail-coverts whitish spotted with brown. In the summer the male assumes a dress much like that of the female, bnt the wings and tail are as above described.

Hab. Europe generally, north to Iceland and central Scandinavia; comparatively rare in Great Britain; northern Africa in winter and is said to have occurred as far south as the Orange River; Asia north to Kamchatka, east to Japan, and south in winter to India and China; North America, south to the West Indies and Mexico in winter.

In habits it resembles *Anas boscas* and is essentially a freshwater duck, feeding chiefly on vegetable matter, but it is also known to eat aquatic insects, small shell-fish, frogs, etc. It breeds in temperate latitudes making a nest like that of *A. boscas*, placed near the water and usually in May, deposits 8 to 13 eggs, pale creamy yellow in colour, and in size averaging about 2·10 by 1·50.

SPATULA, Boie, 1822.

845. SHOVELLER.

SPATULA CLYPEATA.

Spatula clypeata (Linn.), Syst. Nat. i. p. 200 (1766); (Naum.), xi. p. 747, Taf. 306; (Hewitson), ii. p. 400, pl. cxii. fig. 2; (Gould), B. of E. v. pl. 360; id. B. of Gt. Brit. v. pl. 14; Dresser, vi. p. 497, pl. 425; (Audubon), B. Am. vi. p. 293, pl. 394; Salvadori, Cat. B. Br. Mus. xxvii. p. 306; Tacz. F. O. Sib. O. p. 1151; Blanf. F. Brit. Ind. Birds, iv. p. 452; Ridgway, p. 97; Saunders, p. 427; (Lilford), vii. p. 90, pl. 35.

Souchet, French; *Pato trombeteiro*, Portug.; *Pato cuchareta*, Span.; *Cucchiarone*, Ital.; *Löffelente*, German; *Slobeend*, Dutch; *Skéand*, Dan.; *Skovland*, Norweg.; *Skedand*, Swed.; *Lapasorsa*, Finn.; *Schirokonoska*, *Ootka soksoon*, Russ.; *Tidari*, *Punana*, Hindu.; *Hashibiro-gamo*, Jap.

♂ *ad.* (England). Head and upper neck black glossed with bottle-green and purple; hind-neck and back blackish brown with dull white margins, the rump and upper tail-coverts imperceptibly edged with dull fulvous; lower neck and scapulars white; middle tail-feathers brownish grey edged with whitish, the rest dull white with dark centres; wing-coverts sky-blue, the last row tipped with white; speculum bright metallic green narrowly tipped with white; under parts rich rufous; under tail-coverts creamy yellow marbled with brown; a white patch on each side of the base of the tail; bill black, very broad towards the end; legs and feet bright orange; iris yellow. Culmen 2·9, wing 9·0, tail 3·1, tarsus 1·3 inch. The female has the head, neck, and upper parts dark brown with clay-yellow or clay-brown margins; under parts dull clay with dark spots on the breast and flanks; wings as in the male but much duller, the wing-coverts only washed with bluish. In the summer the male assumes a dress like the female but darker, and the blue on the wings and green speculum are retained.

Hab. Europe generally, north to the Arctic circle; North Africa, in winter south to Somaliland and Casamance; Asia east to Japan, north to Kamchatka, south to Southern China, India and Ceylon in winter; North America from Alaska to Mexico, in winter ranging as far south as Panama.

Is a fresh-water duck, though not unfrequently to be seen on the sea-coast; it feeds principally on the seeds of various aquatic plants and vegetable matter, aquatic insects, grain, etc. Usually it is not so shy as *Anas boscas*, and is as a rule a silent bird, but in the breeding season its note *took, took*, may be heard. It breeds in May, June, and July, its nest being a depression in the soil near water, lined with grass and down. Its eggs, 8 to 14 in number, are pale greenish grey, sometimes greyish cream, and measure about 2·0 by 1·37.

MARMARONETTA, Reichenb., 1852.

846. MARBLED DUCK.

MARMARONETTA ANGUSTIROSTRIS.

Marmaronetta angustirostris (Ménétr.), Cat. Rais. p. 58 (1832); (Gould), B. of E. v. p. 373; (Dresser), vi. p. 479, pl. 423; Salvadori, Cat. B. Br. Mus. xxvii. p. 321; Blanf. F. Brit. Ind. Birds, iv. p. 454.

Ruhilla, Roseta, Span.; *Garganella marmorata,* Ital.; *Oozonosòi-tchirok,* Russ.; *Chihil,* Moor.

♂ *ad.* (Spain). Head greyish brown barred with dark brown, the region round the eye dark brown; upper parts dull brown tinged with grey, mottled and marbled with light greyish brown; quills ashy grey; secondaries pale creamy brown; wing-coverts brownish grey; tail ashy brown tipped with creamy buff; under parts greyish white, the sides of head, throat, and neck finely striped with brown, the breast barred, and flanks barred and marbled with greyish brown; under tail-coverts pale buff indistinctly barred; bill bluish grey, black on culmen and tip; legs dusky olive; iris brown. Culmen 1·8, wing 7·9, tail 3·2, tarsus 1·2 inch. Female similar but duller.

Hab. Southern Europe, North Africa, Canaries, South-west Asia, east to Northern India.

In habits this Duck resembles the Teal, and like that bird feeds on vegetable matter, crustacea, insects, and worms; its note is a low croaking whistle. Its nest is constructed of twigs and bents, lined with down, and is placed on the ground near water, usually under a bush, and its eggs 8 to 14 in number are usually laid in May, and are cream-coloured like those of *Q. crecca* and measure about 1·86 by 1·34.

EUNETTA, Bonap., 1856.

847. FALCATED TEAL.

EUNETTA FALCATA.

Eunetta falcata (Georgi), Reis. Russ. Reich. i. p. 167 (1775); (Naum.), xiii. Taf. 389, fig. 1; (Dresser), vi. p. 525, pl. 429; David and Oust. Ois. Chine, p. 504; Salvadori, Cat. B. Br. Mus. xxvii. p. 218; Blanf. F. Brit. Ind. Birds, iv. p. 438; (Tacz.), F. O. Sib. O. p. 1135; (Seebohm), B. Jap. Emp. p. 245.

Kossatii-Sselesen, Kossatka, Russ.; *Yoshi-gamo,* Jap.

♂ *ad.* (Siberia). Crown chestnut-red; a band round the nape and the long nuchal crest metallic green; throat white, below which is a green collar followed by another of white; upper parts vermiculated with greyish brown and white; lower back dark brown, indistinctly vermiculated with grey; upper tail-coverts very long and black; tail greyish brown; wing-coverts clear grey, the larger white at the tip; speculum metallic green; inner secondaries very long, sickle-shaped, black, glossed with green, the shafts and external margins whitish; under parts white vermiculated and barred with grey; under tail-coverts long, black; on each side of the tail a cream-coloured patch ; bill blackish ; legs dull blue-grey ; iris brown. Culmen 1·8, wing 10·0, tail 3·0, tarsus 1·35 inch. The female is smaller, has the head and neck purplish brown striped with whitish ; upper parts rufous or fulvous varied with brown ; wings as in the male, but the inner secondaries not elongated ; upper breast rufous with purplish brown cross-markings ; rest of under parts fulvous indistinctly mottled with brown. After the breeding season the male assumes a dress not unlike that of the female.

Hab. Northern Asia, north to Kamchatka, in winter migrating south to China and India; Japan; of accidental and rare occurrence in Europe.

The present species is a frequenter of fresh-water and in general habits resembles *Q. crecca.* It feeds chiefly on vegetable matter and consorts with the Baikal Teal, the Wild Duck, and Pintail. Its nest is placed on the ground usually near water, and its eggs, 7 to 10 in number, are usually deposited in May and resemble those of *Q. crecca* being pale creamy, smooth in texture, and measure about 2·19 by 1·54.

QUERQUEDULA, Stephens, 1824.

848. GARGANEY.

QUERQUEDULA CIRCIA.

Querquedula circia (Linn.), Syst. Nat. i. p. 204 (1766) ; Gould, B. of E. pl. 364 ; id. B. of Gt. Brit. v. pl. 17 ; Dresser, vi. p. 513, pl. 427 ; David and Oust. Ois. Chine, p. 532 ; Salvadori, Cat. B. Br. Mus. p. 293 ; Blanf. F. Brit. Ind. Birds, iv. p. 449 ; Saunders, p. 435 ; (Lilford), vii. p. 98, pl. 39 ; *A. querquedula*, Linn. Syst. Nat. i. p. 203 (1766) ; Naum. xi. p. 677, Taf. 303 ; Hewitson, ii. p. 409, pl. cxiv. fig. 1 ; Tacz. F. O. Sib. O. p. 1145.

Sarcelle d'été, French : *Marreco, Marrequinho,* Portug. ; *Patito, Cerceta,* Span. ; *Marzajola,* Ital. ; *Knäkente,* German ; *Zomertaling,* Dutch ; *Atlingand,* Dan. ; *Knœand,* Norweg. ; *Årta,* Swed. ; *Heinätavi,* Finn. ; *Tchirok-tres-kuntschik,* Russ. ; *Arasch,* Arab. ; *Chaitwa, Khira,* Hindu. ; *Shima-haji,* Jap.

♂ *ad.* (Denmark). Forehead dull chestnut marked with white, the crown and nape dark brown ; a white stripe from the eye to the nape ; sides of face and neck dark chestnut streaked with white ; back brown washed with ashy blue, the lower back bluer and irregularly barred with white ; tail dark brown with narrow white margins ; wing-coverts clear blue-grey ; alar speculum green, on each side bordered with white ; elongated inner secondaries lavender-grey with black and white stripes along the feathers; breast sandy brown with crescentic blackish bars; lower breast and belly whitish, the flanks, vent, and under tail-coverts vermiculated and spotted with dark brown; on each side of the vent a greyish patch; bill blackish, at the base below flesh-coloured; legs brownish plumbeous; iris brown. Culmen 1·5, wing 7·7, tail 3·1, tarsus 1·1 inch. Female, general colour brown darker on the head, the feathers on upper parts margined with sandy brown and fulvous white; wing-coverts dull ashy grey, and the green speculum absent; streak from the eye, malar region, and throat buffy white; sides of head and lower neck streaked with brown; breast rusty brown marked with white; rest of under parts buffy white, the flanks mottled with brown. After the breeding season the male assumes a dress like that of the female, but retains the green speculum and lavender-blue wing-coverts.

Hab. Europe generally, from below the Arctic circle to the Mediterranean; North Africa in winter south to Somaliland; Asia east to Japan, north to Kamchatka, south in winter to India, Ceylon, Borneo, Java, Celebes, and Ceram.

Frequents fresh-water, but seldom being found on the sea-coast, and feeds on vegetable substances, worms, insects, and larvæ, occasionally on small frogs and fish; its note is a harsh *knack*. It breeds in April or May, its nest being a mere depression in the ground in a morass, meadow, or in a reed-bed, and composed of rushes and dried grass mixed with down. Its eggs, 8 to 12 or 13 in number, are rather deeper creamy yellow than those of the Teal and measure about 1·87 by 1·35.

849. BLUE-WINGED TEAL.

QUERQUEDULA DISCORS.

Querquedula discors (Linn.), Syst. Nat. i. p. 205 (1766); (Wilson), Am. Orn. viii. p. 74, pl. 68, fig. 4; (Audub.), B. Am. vi. p. 287, pl. 393; Salvadori, Cat. B. Br. Mus. xxvii. p. 299; Ridgway, p. 93; Saunders, p. 434; (Lilford), vii. p. 100, pl. 40.

♂ *ad.* (N. America). May always be distinguished by having the head and neck dull plumbeous, the crown dusky, the sides of the occiput glossed with metallic lavender-purple; a crescent-shaped patch of white in front of the eye; wing-coverts rich blue; speculum green with a white bar above; under parts pale chestnut spotted with black; bill black; legs and feet yellowish; iris brown. Culmen 1·75, wing 7·2, tail 3·25, tarsus 1·25 inch. The female has the upper parts dusky varied with buffy white, the under parts dull buff, the chin and upper throat unstreaked, the rest of the head and neck streaked with dusky, the speculum dull greyish brown. In the summer the male like all its allies assumes a dress like that of the female, but retains the brighter colours on the wings.

Hab. North America generally, chiefly east of the Rocky Mountains, ranging south in winter through the whole of the West Indies and Central America to Ecuador.

In its general habits it does not appear to differ from the Garganey, and its nest and eggs resemble those of that species. It is only a very rare straggler to Europe, and has occurred once in Denmark, and at least once in Scotland.

NETTION, Kaup, 1829.

850. THE TEAL.

NETTION CRECCA.

Nettion crecca (Linn.), Syst. Nat. i. p. 204 (1766); (Naum.) xi. p. 701, Taf. 304; (Hewitson), ii. p. 410, pl. cxiv. fig. 2; (Gould), B. of E. v. pl. 362; (id.), B. of Gt. Brit. v. pl. 16; (Dresser), vi. p. 507, pl. 426; (David and Oust.) Ois. Chine, p. 502; Salvadori, Cat. B. Br. Mus. xxvii. p. 243; (Tacz.), F. O. Sib. O. p. 1141; (Blanf.), F. Brit. Ind. Birds, iv. p. 443; (Seebohm), B. Jap. Emp. p. 244; Saunders, p. 431; (Lilford). vii. p. 94, pl. 37.

Sarcelle d'hiver, French; *Marreco*, Portug.; *Cerceta*, Span.; *Alsavola*, Ital.; *Krückente*, German; *Wintertaling*, Dutch; *Krikand*, Dan. and Norweg.; *Krickan*, Swed.; *Giksa*, Lapp.; *Tavi*, Finn.; *Tschirisk*, Russ.; *Kerkedj*, Arab.; *Chota-Murghabt*, *Kerra*, Hindu.; *Ko-gamo*, Jap.

♂ *ad.* (England). Crown, nape, sides of neck and throat deep chestnut; sides of head glossy green, above and below margined with whitish; chin blackish; back grey vermiculated with black and white; upper tail-coverts black narrowly margined with fulvous; elongated scapulars black and white; speculum metallic green; under parts whitish vermiculated with black on the lower breast and flanks, and indistinctly on the abdomen; upper breast spotted with black; under tail-coverts black; whitish along the edge, with a cream-coloured patch on each side; bill blackish; legs and feet brownish grey; iris brown. Culmen 1·55, wing 7·0, tail 2·7, tarsus 0·8 inch. Female blackish brown mottled with reddish brown above; under parts whitish mottled with brown and rufous on the upper breast and flanks; a loral spot and throat clear buff; wings duller than in the male. The male assumes a plumage like that of the female in the summer.

Hab. The whole of Europe, north to Northern Lapland and Iceland, rare in Greenland; Canaries; Azores; North Africa in winter, south to Abyssinia; Asia east to Japan, north to

Kamchatka, south in winter to China, India, and Ceylon; of occasional occurrence in eastern North America.

Is essentially a fresh-water Duck, only found on salt-water in exceptional cases. It feeds at night on vegetable substances, grain, seeds, worms, and slugs, &c. Its nest is placed on the ground, amongst grass, frequently under a bush, and is composed of bents and down. The eggs from 8 to 10, occasionally as many as 15, are deposited in May and are yellowish white like old ivory and measure about 1·78 by 1·31.

851. AMERICAN TEAL.

NETTION CAROLINENSE.

Nettion carolinense (Gmel.), Syst. Nat. i. p. 533 (1778); (Audub.), B. Am. vi. p. 281, pl. 392; Salvadori, Cat. B. Br. Mus. xxvii. p. 250; Ridgway, p. 94; Saunders, p. 433; (Lilford), vii. p. 96, pl. 38.

♂ *ad.* (N. America). Differs from *N. crecca* in wanting the striped scapulars and in having a broad whitish crescentic band on each side of the breast, and the vermiculations in the plumage are much finer. The female closely resembles that of *N. crecca.*

Hab. North America, breeding usually north of the United States, migrating in winter south to the West Indies, Mexico, and Honduras; Greenland; of rare occurrence in Europe but has been obtained at least twice in Great Britain.

In habits and nidification it does not differ from *N. crecca,* and its eggs resemble those of that species, and in size average 1·76 by 1·30.

852. BAIKAL TEAL.

NETTION FORMOSUM.

Nettion formosum (Géorgi), Reis. Russ. Reich. p. 168 (1775); (Temm. and Schlegel), Faun. Jap. Aves, p. 127, Tabb. 82B and C; (Dresser), vi. p. 521, pl. 428; (David and Oust.) Ois. Chine, p. 503; Salvadori, Cat. B. Br. Mus. xxvii. p. 240; (Tacz.) F. O. Sib. O. p. 1138; Blanf. F. Brit. Ind. Birds, iv. p. 442; *A. glocitans*, Pall. Acta. Holm. xl. p. 33, Tab. i. (1779); (Gould), B. of E. pl. 363.

Klokuschka, Moklok, Mokloschka, Russ.; *Aji,* Jap.

♂ *ad.* (Siberia). Crown, hind-neck, throat, and a band across the face black; face and sides of neck buff margined with white; crown behind the eye bordered with white; a crescentic green band from behind the eye round the nape; back blue-grey finely vermiculated with black and white;

quills and tail dark brown ; elongated scapulars, black down the middle, white on the inner, and rufous on the outer web ; wing-coverts brown, the larger edged with rufous ; speculum greenish bronze near the coverts, then black with white tips ; breast brownish vinous spotted with black ; abdomen buffy whitish ; flanks like the back ; vent and under tail-coverts black, the latter bay on the sides, the longer ones tipped with white ; bill dark bluish brown ; legs and feet greyish blue, the webs darker ; iris reddish brown. Culmen 1·5, wing 8·5, tail 3·6, tarsus 1·0 inch. The female is not unlike that of *N. crecca*, but is larger, has the speculum as in the male, but duller, and a buff spot on each side of the head in front of the lores and one under each eye.

Hab. Northern Asia, chiefly eastern Siberia, west to the Yenesei, north to Kamchatka, migrating south to Mongolia, Corea, Japan, China, and rarely to India ; of accidental occurrence in Europe, having been twice obtained in France, and once in Italy.

In habits it is said to resemble *N. crecca*, but is much more noisy, and when on passage its deep cluckling call-note *klo, klo, klo,* may be heard at a considerable distance. It breeds in North-eastern Siberia, the nest being placed on the ground, on the river-banks under willow-bushes. The eggs 7 to 8 in number are deposited late in June or early in July, resemble those of *N. crecca*, but have a faint olivaceous tinge, and measure about 1·85 by 1·33.

DAFILA, Leach, 1824.

853. PINTAIL.

DAFILA ACUTA.

Dafila acuta (Linn.), Syst. Nat. i. p. 202 (1766) ; (Naum.), xi. p. 638, Taf. 301 ; (Hewitson), ii. p. 403, pl. cxiii. fig. 2 ; Gould, B. of Gt. Brit. v. pl. 18 ; David and Oust., Ois. Chine, p. 498 ; Dresser, vi. p. 531, pls. 430, 431 ; Salvadori, Cat. B. Br. Mus. xxvii. p. 270 ; Blanf. F. Brit. Ind. Birds, iv. p. 447 ; Tacz. F. O. Sib. O. p. 1147 ; Saunders, p. 429 ; (Lilford), vii. p. 92, pl. 36 ; Ridgway. p. 98 ; (Seebohm), B. Jap. Emp. p. 246 ; *D. caudacuta* (Pall.), Zoogr. Ross. As. ii. p. 280 (1811) ; Gould, B. of E. v. pl. 365.

Pilet, French : *Rabijunco*, Portug. ; *Pato-careto*, Span. ; *Codone*, Ital. ; *Spiessente*, German ; *Pijlstaart*, Dutch ; *Spidsand*, Dan. and Norweg. ; *Stjertand*, Swed. ; *Vuojas*, Lapp. ; *Jouhisuorsa*, Finn. ; *Schilochvost*, Russ. ; *Bulbul*, Arab. ; *Sanh*, *Sink-par*. Hindu. ; *Ō-naga-gamo*, Jap.

♂ *ad.* (England). Crown and nape dark umber-brown with paler margins; sides of head, chin, and fore-neck reddish brown with faint purplish reflections; hind-neck blackish brown glossed with green; lower hind-neck and upper parts white vermiculated with black, the rump and upper tail-coverts barred and marbled with brown; middle tail-feathers blackish brown, elongated, and pointed, the outer one and quills dark grey, the former tipped with white; alar speculum metallic green with a ferruginous bar above and a white one below; elongated alar feathers black margined with white; a long line on each side of the neck and breast white; under parts white; flanks like the back; lower abdomen indistinctly barred with greyish brown; crissum and under tail-coverts black; beak blackish, the sides dull plumbeous; legs and feet greyish black; iris orange-brown. Culmen 2·2, wing 11·2, tail 7·5, tarsus 1·6 inch. The female has the head and nape reddish brown the rest of the head and neck yellowish white all lineated with dark brown; the upper parts dark brown edged and marked with dirty white, the under parts yellowish white marked with brown; no speculum but with two white bars across the wings. In the summer the male assumes a dress much like that of the female but retains the speculum.

Hab. Europe generally, breeding in the north as far as northern Lapland, migrating south in winter to North Africa; Asia, east to Japan, north to about 71° N. Lat., south in winter to Mongolia, China, India, and Ceylon; North America from Alaska, south to Cuba and Panama.

In general habits it much resembles *A. boscas,* and is a fresh-water duck, feeding on aquatic plants, seeds, tender shoots, roots, insects, and their larvæ, but may also be met with off the sea-coasts. Its note is soft and is not so high-pitched as that of its allies, nor is it a noisy bird. It breeds rather later than *A. boscas,* its nest being a depression in the ground, not far from water and usually under a bush, lined with small flags, grass-bents, and down. The eggs 7 to 9 in number are dull greenish grey, rather elongated in shape, and measure about 2·9 by 1.45.

MARECA, Stephens, 1824.

854. WIGEON.

MARECA PENELOPE.

Mareca penelope (Linn.), Syst. Nat. i. p. 202 (1766); (Naum.) xi. p. 724, Taf. 305; Hewitson, ii. p. 412, pl. cxiv. fig. 3; Gould, B. of E. v. pl. 359; id. B. of Gt. Brit. v. pl. 13; Dresser, vi. p. 541, pls. 432, 433; David and Oust. Ois. Chine, p. 499; Salvadori, Cat. B. Br. Mus. xxvii. p. 227; Blanf. F. Brit. Ind. Birds, iv. p. 445; Tacz. F. O. Sib. O. p. 1156; Ridgway, p. 96; Saunders, p. 437; Lilford. vii. p. 101, pl. 41.

Canard siffleur, French ; *Assobiadeira*, Portug. ; *Pato-florentino*, Span. ; *Fischione*, Ital. ; *Pfeifente*, *Blässente*, German ; *Smient*, Dutch ; *Pibeand*, *Blisand*, Dan. ; *Brunnakke*, Norweg. ; *Bläsand*, Swed. ; *Snartal*, Lapp. ; *Haapana*, Finn. ; *Swijas*, *Swestun*, Russ. ; *Peasan*, *Patari*, Hindu. ; *Hidori*, Jap.

♂ *ad.* (England). Forehead and fore-crown warm ochreous ; rest of head and neck rich rusty red ; region round and behind the eye, front of throat, lower neck, and nape marked with green ; upper parts and flanks white vermiculated with black ; wing-coverts greyish brown and white ; speculum green ; elongated alar feathers blackish grey on the inner and black margined with white on the outer web ; upper breast pinky vinous ; under parts white ; under tail-coverts black ; beak blue-grey, the tip black ; legs plumbeous ; iris reddish brown. Culmen 1·55, wing 10·2, tail 4·8, tarsus 1·55 inch. The female has the head and neck greyish ochreous striped with black ; upper parts dull brown with whitish margins ; speculum absent ; under parts white, the breast marked with reddish brown, the under tail-coverts with greyish brown. In the late summer the male resembles the female but the head and neck are dull chestnut spotted with black ; no buff patch ; wings as above but the wings-coverts are ashy grey ; upper breast and flanks rusty brown.

Hab. Europe generally, breeding in the high north, migrating in winter to Africa, as far south as Abyssinia, and Madeira ; Asia north to Kamchatka, east to Japan, and south in winter to China, India, and Borneo ; of occasional occurrence in Eastern North America and more frequent in Alaska.

Resembles the Teal in its choice of habitat, and though also found on the sea-coast usually frequents quiet bays, inlets, and mud-banks. It feeds on vegetable substances, aquatic insects, crustaceans, &c. and does not dive in search of food. Its whistling note is very frequently to be heard, especially at night. It breeds both near water and at some distance from it, its nest being a depression in the ground lined with down and a few grass-bents and moss. The eggs which are deposited in May or early in June are creamy white and measure about 2·27 by 1·55.

855. AMERICAN WIGEON.

MARECA AMERICANA.

Mareca americana (Gmel.), Syst. Nat. i. p. 526 (1788) ; (Audub.), B. Am. vi. p. 259, pl. 389 ; Dresser, ix. p. 289, pl. 707 ; Salvadori, Cat. B. Br. Mus. xxvii. p. 233 ; Tacz. F. O. Sib. O. p. 1160 ; Ridgway, p. 96 ; Saunders, p. 439 ; Lilford, vii. p. 104, pl. 42.

♂ *ad.* (N. America). Differs from *M. penelope* in having the crown and forehead white, unspotted, the head and neck dull white finely speckled with black; a broad space of metallic green extending from the eye to the occiput. Culmen 1·6, wing 10·55, tail 5·0, tarsus 1·45 inch. The female differs from that of *M. penelope* in having the pale parts of the head and neck whitish.

Hab. North America in general, breeding chiefly north of the United States; in winter south to Guatemala and Cuba; N. Iceland, where it breeds; has occurred two or three times in Britain.

In habits it does not differ from *M. penelope*, but is said to breed always some distance from water, under trees or bushes. The eggs resemble those of *M. penelope* and measure about 2·06 by 1·48.

ÆTHYIA, Boie, 1822.

856. RED-CRESTED POCHARD.

ÆTHYIA RUFINA.

Æthyia rufina (Pall.), Reise ii. App. p. 713, No. 28 (1773); (Naum.), xii. p. 7, Taf. 307; (Gould), B. of E. v. pl. 369; (id.), B. of Gt. Brit. v. pl. 22; (Dresser), vi. p. 559, pl. 435; (Salvadori), Cat. B. Br. Mus. xxvii. p. 328; (Blanford), F. Brit. Ind. Birds, iv. p. 456; (Saunders), p. 441; (Lilford), vii. p. 106, pl. 43.

Canard siffleur huppé, French; *Sivert*, Span.; *Germano turco*, Ital.; *Kolbenente*, German; *Nyrok krasnonosyi*, Russ.; *Lál-chonch*, *Lál-sir*, Hindu.

♂ *ad.* (S. Russia). Head crested; head and upper neck rusty red with a pink tinge, the crown paler; hind and lower neck and upper breast black; middle of back brown, the scapulars paler and reddish; rump and upper tail-coverts blackish brown; tail and quills dark ashy grey; secondaries white with a subterminal greyish brown bar; elongated inner secondaries ashy grey; wing-coverts ashy brown; under parts blackish brown, the sides of the abdomen white; bill vermilion-red, the tip white; legs orange-red; iris reddish brown. Culmen 2·3, wing 10·8, tail 3·5, tarsus 1·6 inch. The female is greyish brown above, the scapulars paler; secondaries greyish white barred with brown towards the tip; throat, sides of head below the eye, neck, and under parts whitish; bill blackish with a pink tip; legs and feet pinkish, the webs blackish.

Hab. Southern Europe, rarely straying north as far as Great Britain and Denmark; North Africa; Southern Russia east to Turkestan, migrating in winter south to Northern and Central India.

Frequents fresh-water lakes and marshes, and is extremely shy and wary; its call-note is harsh, not unlike the croak of a Crow, and its food consists of water-plants, aquatic insects, small shellfish, and fish or frog spawn. It breeds near fresh-water, placing its nest on the flags or ground, constructing it of dead stems of rushes or leaves lined with down, and in May deposits 7 to 9, occasionally 10 eggs which are greenish gray in colour and measure about 2·28 by 1·60.

857. POCHARD.

ÆTHYIA FERINA.

Æthyia ferina (Linn.), Syst. Nat. i. p. 203 (1766); (Naum.), xiii. p. 21, Taf. 308; (Hewitson), ii. p. 433, pl. cxvii. fig. 2; Gould, B. of E. v. pl. 367; (id.), B. of Gt. Brit. v. pl. 20; (Dresser), vi. p. 551, pl. 434; David and Oust. Ois. Chine, p. 506; (Salvadori), Cat. B. Br. Mus. xxvii. p. 335; (Tacz.), F. O. Sib. O. p. 1162; (Blanf.), F. Brit. Ind. Birds, iv. p. 458; (Saunders), p. 443; (Lilford), vii. p. 107, pl. 44; (Seebohm), B. Jap. E. p. 254.

Milouin, French; *Tarrantana*, Portug.; *Cabezon*, Span.; *Moriglione*, Ital.; *Tafelente*, German; *Tafeleend*, Dutch; *Taffeland*, Dan. and Norweg.; *Brunand*, Swed.; *Punasotka*, Finn.; *Rijegolovka*, *Krasnogolovoi-Nyrok*, Russ.; *Aurár-nar*, Hindu; *Hoshihajiro*, Jap.

♂ *ad.* (England). Head and upper-neck coppery red; lower neck, upper back, upper breast, rump, upper and under tail-coverts black; upper parts otherwise white vermiculated with black; quills brown tipped with blackish; tail blackish brown tinged with grey; speculum greyish; under parts white indistinctly vermiculated with blackish; bill black with a broad band of dull light blue; legs plumbeous; iris bright yellow. Culmen 2·2, wing 8·4, tail 2·8, tarsus 1·45 inch. The female has the head and neck dull reddish brown, the base of the bill, chin, and upper throat dirty white; sides of head marked with dirty white; back dark brown with a few greyish white feather-tips and vermiculated with blackish; breast dark reddish brown with a few whitish margins; abdomen white, the lower part and under tail-coverts brownish grey. In the late summer the male resembles the female, but the head and neck are redder, the back more marked with white and more clearly vermiculated.

Hab. Europe generally, north to Central Sweden; rare in Iceland; the British Islands, South Europe, and North Africa in winter; Canaries; Asia east to Japan, north to Southern Siberia, south to Northern India in winter; in America it is replaced by a very closely allied form *Æ. americana*, Bp.

Is an expert diver and obtains its food to some extent inland, but chiefly under the surface of the water, feeding chiefly on vegetable substance, but also, it is said, on aquatic insects. As a rule it is a somewhat silent bird, and its call-note is a low *rerrr-rerrr-a.* Its nest is a mere hollow in the ground near water lined with grass-bents and down, and the eggs 7 to 10, sometimes 12 in number, are usually deposited early in June, are greenish grey, sometimes with a faint buff tinge, and measure about 2·38 by 1·65.

858. SCAUP DUCK.

ÆTHYIA MARILA.

Æthyia marila (Linn.), Syst. Nat. i. p. 196 (1766) ; (Naum.), xii. p. 88, Taf. 311 ; (Hewitson), ii. p. 426, pl. cxvii. fig. 3 ; (Gould), B. of E. v. pl. 371 ; (id.) B. of Gt. Brit. v. pl. 24 ; (Dresser), vi. p. 565, pl. 436 ; (David and Oust.) Ois. Chine, p. 507 ; (Salvadori), Cat. B. Br. Mus. p. 355 ; (Tacz.), F. O. Sib. O. p. 1164 ; (Blanf.), F. Brit. Ind. Birds, iv. p. 462 ; (Saunders), p. 449 ; (Lilford), vii. p. 112, pl. 46 ; (Ridgway), p. 103.

Canard milouinan, French; *Moretta-grigia,* Ital.; *Bergente,* German; *Toppereend,* Dutch ; *Bjergand,* Dan. and Norweg.; *Bergand,* Swed.; *Stuora-fietag,* Lapp.; *Iso-sorrti Tunturi-sotka,* Finn.; *Sorovoi-Nyrok, Beloglàska,* Russ.; *Nakihashiro-gamo,* Jap.

♂ *ad.* (N. Russia). Head, neck, forepart of back, breast, rump, upper and under tail-coverts, and tail black ; head and upper neck glossed with bottle-green ; upper parts white vermiculated and barred with black ; speculum white tipped with black ; under parts white, the lower abdomen faintly vermiculated with black ; bill and legs light plumbeous ; webs blackish ; iris yellow. Culmen 1·85, wing 8·5, tail 2·8, tarsus 1·4 inch. The female has the forepart of the head and chin white ; rest of the head, neck, and breast dark reddish brown ; upper parts dark brown, the back slightly vermiculated with white ; abdomen dull white, the flanks vermiculated with brown ; crissum and under tail-coverts dark brown slightly vermiculated with white ; bill and legs darker than in the male. The male in late summer resembles the female but the head and neck are blacker, the back more barred with dirty white, and the soft parts as above.

Hab. Europe generally, north to Lapland and Iceland ; rare in Greenland ; Southern Europe and North Africa in winter ; Asia east to Japan, north to Kamchatka, south in winter to Northern India and China. The American form, *Æ. nearctica* (Stejn.) is said to differ in having the six inner quills without distinct white spaces on the inner webs.

Is an expert diver, obtaining its food, which consists chiefly of small shellfish and minute crustacea and marine plants, chiefly by diving. It swims with ease and flies tolerably swiftly, usually not high above the surface of the water. It breeds in June or early in July, nesting on the ground under a bush, sometimes under a stone or in a hole, its nest generally consisting only of grass. Its eggs, 8 to 9, sometimes 11 in number, are greyish stone-buff and measure about 2·48 by 1·75. East Asiatic birds (*F. mariloides*, Vig.) are said to have sometimes a purple gloss on the head.

859. TUFTED DUCK.

ÆTHYIA FULIGULA.

Æthyia fuligula (Linn.), Syst. Nat. i. p. 207 (1766) ; (Naum.) xii. p. 64, Taf. 310 ; (Salvadori), Cat. B. Br. Mus. xxvii. p. 363 ; (Blanf.), F. Brit. Ind. Birds, iv. p. 463 ; (Ridgway), p. 103. *Æ. cristata* (Leach), Syst. Cat. M. and B. Brit. Mus. p. 39 (1816) ; (Hewitson), ii. p. 430, pl. cxviii. fig. 3 ; (Gould), B. of E. v. pl. 370 ; (id.) B. of Gt. Brit. v. pl. 23 ; (Dresser), vi. p. 573, pl. 437 ; (Seebohm), B. Jap. Emp. p. 355 ; (Tacz.), F. O. Sib. O. p. 1167 ; (Saunders), p. 447 ; (Lilford), vii. p. 113, pl. 47.

Morillon, French ; *Negrella*, Portug. ; *Coquinero*, Span. ; *Moretta*, Ital. ; *Haubenente*, *Schopfente*, German ; *Kuifeend*, Dutch ; *Topand*, Dan. and Norweg. ; *Vigg*, Swed. ; *Ucib-fietag*, Lapp. ; *Pieni-sorrti Jouhisotka*, Finn. ; *Tschernett*, Russ. ; *Dubaru*, *Ablak*, Hindu. ; *Kinkurohajiro-gamo*, Jap.

♂ *ad.* (England). Head, neck, upper parts and wings, breast and under tail-coverts black ; head with a long crest and glossed with purple ; speculum white tipped with black ; a few indistinct vermiculations on the back ; under parts white, the lower abdomen washed with grey ; bill plumbeous tipped with black ; legs dull olive-plumbeous the webs blackish ; iris yellow. Culmen 1·8, wing 8·2, tail 2·8, tarsus 1·5 inch. The female has the head, neck, breast, and upper parts blackish brown with a faint purplish gloss ; under parts brownish grey ; forehead tinged with brownish white ; crest very short. In the late summer the plumage of the male is browner on the head and neck, the back and lower neck indistinctly powdered with greyish white ; crest shorter than in the spring.

Hab. Europe generally, north as far as Lapland ; Southern Europe and North Africa in winter, ranging south to Abyssinia ; Asia east to Japan, north to Kamchatka, south in winter to China and India, and of accidental occurrence in the Malay Archipelago and Polynesian Islands.

In general habits it most nearly resembles the Scaup Duck. In the summer it frequents fresh-water and then feeds chiefly on vegetable matter, aquatic insects, frogs, &c., and in the winter it is found chiefly on the sea-coast, and then feeds on small shellfish, &c., obtaining its food chiefly by diving. Its nest, which is placed on the ground, close to, or not far from water, is composed of grass-bents and a few leaves, matted together with sooty brownish black down with greyish white centres, and its eggs, usually 8 in number are deposited early in June, and are uniform pale olive-green or greenish buff, smooth in texture of shell and measure about 2·31 by 1·65.

860. White-eyed Duck.

ÆTHYIA NYROCA.

Æthyia nyroca (Güld.), Nov. Comm. Petrop. xiv. p. 403 (1769); (Naum.), xii. p. 41, Taf. 309; (Saunders), p. 445; (Lilford), vii. p. 109, pl. 45; *Æthyia ferruginea* (Gmel.), Syst. Nat. i. p. 528 (1788); Dresser, vi. p. 581, pl. 438; Blanf. F. Brit. Ind. Birds, iv. p. 460; *Æ. africana*, (Gmel.), Syst. Nat. i. p. 522 (1788); (Salvadori), Cat. B. Br. Mus. xxvii. p. 345; *Æ. leucophthalma* (Bechst.), Orn. Taschenb. i. p. 450 (1802); (Gould), B. of E. v. pl. 368; (id.) B. of Gt. Brit. v. pl. 21.

Fuligule nyroca, French; *Zarro*, Portug.; *Pardote, Rochet*, Span.; *Moretta-tabaccata*, Ital.; *Moorente*, German; *Beloglasyi-Nyrok*, Russ.; *Ziriguil*, Moor.; *Karchiya, Burar-mada*, Hindu.

♂ *ad.* (*Volga*). Head, neck, and breast chestnut-red; a small spot at the base of the under mandible white; a blackish brown band round the lower neck; upper parts blackish brown; speculum white tipped with black; under parts white; flanks reddish brown; lower abdomen fulvous; beak and legs plumbeous; iris white. Culmen 1·6, wing 6·8, tail 2·3, tarsus 0·9 inch. The female is duller in colour, the feathers on the back and breast with pale tips; abdomen marked with brown.

Hab. Central and Southern Europe; of somewhat rare occurrence in Great Britain; Canaries; North Africa, south to Abyssinia; Western Asia, north to the Ob valley, east to Kashmir, south to Central India.

Frequents chiefly fresh water, but is also occasionally to be met with on the sea-coast in winter. Its food in summer consists chiefly of vegetable substances, but in winter of insects and their larvæ, crustacea, and mollusca. Its call-note resembles that of *Æ. ferina* but is not so loud. Its nest is placed on the ground, or on a tussock, sometimes in a bush 2 to 3 feet above the ground, always well concealed. Its eggs 7 to 12 in number are usually deposited in May and are yellowish or greyish buff and measure about 2·1 by 1·46.

861. Bær's Duck.

ÆTHYIA BÆRI.

Æthyia bœri (Radde), Reis. S. O. Sib. ii. p. 376, pl. 15 (1863); (David and Oust.), Ois. Chine, p. 509. pl. 124; (Seebohm), B. Jap. Emp. p. 254; (Salvadori), Cat. B. Br. Mus. xxvii. p. 344; (Tacz.), F. O. Sib. O. p. 1169; (Blanf.) F. Brit. Ind. Birds, iv. p. 461.

Akahajiro, Jap.

♂ *ad.* Differs from *N. ferruginea* in having the head and neck black, glossed with bottle-green; bill bluish plumbeous, the base and nail black; feet lead-grey; iris white or pale yellow. Culmen 2·0, wing 8·0, tail 2·8, tarsus 1·25 inch. The female differs from that of *N. ferruginea* in having the head and neck brownish black, with a very faint gloss; lores rufous brown.

Hab. Kamchatka; Eastern Siberia; in winter migrating to Japan, China, and India; has once occurred in England (cf. Bull. B. O. Club xii. p. 25).

In its general habits and nidification it resembles *Æ. nyroca*; its eggs also resemble those of that species, being yellowish buff, and measure about 2·1 by 1·54.

CLANGULA, Leach, 1819.

862. Golden-eye.

CLANGULA GLAUCION.

Clangula glaucion (Linn.), Syst. Nat. i. p. 201 (1766); Gould, B. of Gt. Brit. v. pl. 31; Dresser, vi. p. 595, pl. 440; Salvadori, Cat. B. Br. Mus. xxvii. p. 376; Blanf. F. Brit. Ind. Birds, iv. p. 464; Saunders, p. 451; *A. clangula*, Linn. Syst. Nat. i. p. 201 (1766); Naum. xii. p. 161, Taf. 316; (David and Oust.), Ois. Chine, p. 505; (Tacz.), F. O. Sib. O. p. 1171; Ridgway p. 105; (Lilford), vii. p. 115, pl. 48; Seebohm, B. Jap. Emp. p. 253; *C. vulgaris* Fleming, Brit. An. p. 120 (1828); Gould, B. of E. v. pl. 379; (Hewitson), ii. p. 435, pl. cxix. fig. 1; *C. americana* Bp. Comp. List. p. 58 (1838); Ridgway, p. 105.

Garrot, French; *Retor* ♂, *Perdigana d'aigua* ♀, Span.; *Quatr'occhi,* Ital.; *Schellente,* German; *Brileend,* Dutch; *Hvinand,* Dan. and Norweg.; *Knipa,* Swed.; *Sotka, Telkha,* Finn.; *Gogol,* Russ.; *Shinori-gamo,* Jap.

♂ *ad.* (Norway). Head and upper neck black glossed with bottle-green; feathers on crown and nape elongated; lower neck and under parts white; back, rump, lesser wing-coverts, primaries, and tail black, the last tinged with grey; speculum white; scapulars white externally, margined with black; a large white spot on each cheek close to the gape; lower flanks and crissum marked with black; bill blackish; legs orange-yellow; iris yellow. Culmen 1·4, wing 8·8, tail 3·8, tarsus 1·55 inch. The female has the head and upper neck deep rich brown, the lower neck and sides of fore-back slate-grey with pale tips; upper parts greyish black; under parts whiter, the flanks greyish brown. The male in late summer resembles the female, but may always be distinguished by its pure white wing-coverts.

Hab. Europe in the high north, migrating in winter to south Europe and the northern coasts of Africa; Northern Asia as far north as Kamchatka, migrating in winter to Japan, Corea, China, and India; North America, in summer from Maine and Canada northward, migrating in winter south to Cuba and Mexico.

In the summer it is found inland and being usually unmolested during the breeding season it is by no means shy, but in the winter season, when it frequents the sea-coast it is very shy and wary. It is a very expert diver, obtaining its food under water and feeding on small crustaceans, aquatic insects, and aquatic vegetable substance. It flies swiftly with a whistling sound. It breeds in the high north in hollow trees, in nesting-boxes set up for that purpose, and lines the nest-hole plentifully with down. The eggs 10 to 12, sometimes as many as 19 in number, are usually deposited in June, and are greyish green, smooth in texture of shell and measure about 2·40 by 1·55.

863. Barrow's Golden-eye.

CLANGULA ISLANDICA.

Clangula islandica (Gmel.), Syst. Nat. i. p. 541 (1788); Naum. xii p. 186, Taf. 317; Dresser, vi. p. 603, pl. 441; Salvadori, Cat. B. Br. Mus. xxvii. p. 383; (Ridgway), p. 105; *C. barrovii,* Swains. Faun. Bor. Am. ii. p. 456, pl. 70 (1831); Gould, B. of E. v. pl. 380.

Niarkortok, Greenl.; *Husönd,* Icel.

♂ *ad.* (Iceland). Differs from *C. glaucion* in being larger, the head more crested and glossed with purple, and between the eye and the bill is an irregular crescentic white patch ; the white on the wing consists of two smaller patches, divided by a broad black band. Culmen 1·5, wing 9·2, tail 4·0, tarsus 1·6 inch. The female and young may be distinguished from those of *C. glaucion* by their larger size, the larger and higher bill, and by having less white on the wing.

Hab. Iceland and Greenland, occasionally straying to the northern coasts of Europe, and has occurred as far south as Valencia in Spain ; Northern North America, breeding from the Gulf of St. Lawrence northward ; in winter migrating south to New York, Illinois, Utah, &c.

In its habits it resembles *C. glaucion*, but it breeds amongst stones and in holes in the rocks, and even in holes in houses. Its eggs 9 to 12 in number are deposited in June, and resemble those of *C. glaucion*, but measure about 2·75 by 1·75.

864. BUFFLE-HEADED DUCK.

CLANGULA ALBEOLA.

Clangula albeola (Linn.), Syst. Nat. i. p. 199 (1766) ; (Audub.) B. Am. vi. p. 369, pl. 408 ; Dresser, vi. p. 589, pl. 439 ; Salvadori, Cat. B. Br. Mus. xxvii. p. 385 ; Tacz. F. O. Sib. O. p. 1174 ; (Ridgway), p. 106 ; Saunders, p. 453 ; Lilford, vii. p. 117, pl. 49.

♂ *ad.* (New Brunswick). Head and upper neck black, glossed with metallic green and purple ; a large white patch from behind the eye extending across the occiput ; lower neck, central and larger wing-coverts, outer scapulars, and speculum white ; upper parts otherwise black ; tail grey ; under parts white ; bill blackish plumbeous ; legs and feet yellowish pink ; iris deep brown. Culmen 1·45, wing 6·7, tail 2·9, tarsus 1·3 inch. The female has the head, neck, and upper parts blackish brown ; a white patch on the ear-coverts, and a band across the wing white ; under parts white, the flanks tinged with ashy grey.

Hab. The Northern United States and British North America, migrating south in winter to Mexico and the West Indies ; a very rare straggler to Great Britain, and has once been obtained on Bering Island, North-east Asia.

In general habits it resembles *C. glaucion*, but is if anything a more expert diver, and will dive at the flash of a gun, hence its local name on the North American coasts of Spirit Duck and Dipper. In the summer it feeds on vegetable matter, snails, worms, &c., and in the winter when off the sea-coast on small shell-fish, shrimps, &c. Like the Golden-eye it is a tree-breeder, nesting in hollow trees and deposits 8 to 10 eggs which are buffy or yellowish white and measure about 1·98 by 1·46.

COSMONETTA, Kaup, 1829.

865. HARLEQUIN DUCK.

COSMONETTA HISTRIONICA.

Cosmonetta histrionica (Linn.), Syst. Nat. i. p. 204 (1766) ; (Naum.), xii. p. 199, Taf. 318 ; (Hewitson), ii. p. 433, pl. cxviii. fig. 2 ; (Gould), B. of E. v. pl. 381 ; Dresser, vi. p. 609, pl. 442 ; (Audub.), B. Am. vi. p. 374, pl. 409 ; Salvadori, Cat. B. Br. Mus. xxvii. p. 395 ; Tacz. F. O. Sib. O. p. 1176 ; (Ridgway), p. 107 ; Saunders, p. 457 ; Lilford, vii. p. 121, pl. 51 ; *Clangula torquata*, Brehm, Vogelfang, p. 385 (1855) ; (Gould), B. of Gt. Brit. v. pl. 32.

Canard histrion, French ; *Kragenente*, German ; *Tornauiarsuk*, Greenl. ; *Straumönd*, Icel. ; *Strömand*, Dan. and Swed. ; *Tschernaya-polossataya-Ootka*, Russ. ; *Shinori-gamo*, Jap.

♂ *ad.* (Greenland). A large patch in front of the eye, and a spot on the ear-coverts white ; a broad stripe through the middle of the crown to the nape black, bordered with white ; from above each eye to the nape a broad rusty-red stripe ; rest of head and neck blackish blue, marked with a long white stripe on each side of the neck ; breast, back, and lesser wing-coverts deep dull blue ; wings, tail, and rump black, the inner secondaries and scapulars marked with white ; speculum glossy purple ; on the lower neck an interrupted white collar, and another in front of the wing ; under parts brown, tinged with blue-grey ; flanks chestnut-red ; under tail-coverts black, with a white spot on each side ; bill deep lead-blue, the nail lighter ; legs brown ; iris dark brown. Culmen 1·3, wing 8·0, tail 4·25, tarsus 1·4 inch. The female is greyish brown, paler below ; forehead and at the base of the bill brownish white ; a white patch in front of the eye, and one on the ear-coverts ; breast and abdomen closely marked with white. In the late summer the male has the plumage much duller, the speculum dusky brownish grey, with a slight metallic gloss ; under parts greyish white, spotted with greyish brown, the flanks and under tail-coverts nearly uniform greyish brown.

Hab. Greenland, Iceland ; of rare occurrence in Great Britain and continental Europe ; Eastern Siberia and Kamchatka, visiting Japan in winter ; Northern North America, migrating in winter south to the Middle United States, the Ohio valley, and the coasts of California.

Like its allies it is an expert diver and can remain a considerable time below the surface. It flies swiftly, usually not high above the surface of the water, and if alarmed will dive at once from the air into the water. In winter it feeds on small mollusca which it obtains by diving, but in summer chiefly on aquatic insects and their larvæ. Its nest is placed on the ground close to some swift-flowing stream, and is most carefully concealed. The eggs 8 to 10 in number, are usually deposited in June or early in July, and are rich cream-coloured, smooth in texture of shell, and measure about 2·32 by 1·45.

HARELDA, Steph., 1824.

866. Long-tailed Duck.

HARELDA GLACIALIS.

Harelda glacialis (Linn.), Syst. Nat. i. p. 203 (1766); (Naum.), xii. p. 210, Taf. 319; (Hewitson), ii. p. 431, pl. cxviii. fig. 1; Gould, B. of E. v. pl. 382; id. B. of Gt. Brit. v. pl. 33; Dresser, vi. p. 617, pls. 443, 444; (Audub.), B. Am. vi. p. 379, pl. 410; Salvadori, Cat. B. Br. Mus. xxvii. p. 389; Tacz. F. O. Sib. O. p. 1179; Saunders, p. 455; Lilford, vii. p. 119, pl. 50; *A. hyemalis*, Linn. Syst. Nat. i. p. 202 (1766); (Ridgway); p. 106.

Harelde glaciale, French; *Moretta codona,* Ital.; *Eisente,* German; *Ijseend,* Dutch; *Havlit,* Dan.; *Isand,* Norweg.; *Alfogel,* Swed.; *Aglek,* Greenl.; *Havelli,* Icel.; *Alli,* Finn.; *Vostroh-vostka, Polyarnöi-nyrok,* Russ.

♂ *ad.* (New Brunswick). Forehead and sides of head ashy grey, browner round the eye; a long brown patch on the sides of the neck, becoming chestnut-red below; rest of head, neck, upper breast, back, and scapulars white; sides of and lower back, rump, upper tail-coverts, and elongated middle tail-feathers black; rest of tail white; wing-coverts, primaries, and lower breast brownish black, secondaries washed with chestnut; abdomen white; bill blackish plumbeous, with a band of pinkish orange; legs plumbeous; iris reddish brown. Culmen 1·2, wing 9·0, tail 8·0, the middle-feathers 5·0 longer than the rest, tarsus 1·4 inch. The female has the crown and nape blackish brown, becoming greyish on the hind-neck; upper parts blackish, the scapulars ashy brown with darker centres; middle tail-feathers not elongated; sides of head dull white; chin and a patch down the sides of the neck brown; throat washed with dull brown; a broad blackish brown band across the upper breast; under parts otherwise white. In the summer the male has the forepart of the head sooty grey, the rest of the head, neck, and breast black; upper parts black margined with rusty-red; under parts white.

Hab. The high northern portions of Europe, Asia, and America, visiting the coasts of continental Europe, and the British Islands in winter, and has been obtained in Italy; Asia, in winter, south to Japan, and in North America to South Carolina.

In the winter season it frequents the sea-coasts and is very hardy, only seeking sheltered places during very severe weather. It dives extremely well, and seeks its food chiefly under water, feeding on small shell-fish. It is a very noisy bird, its peculiar gabbling cry being uttered incessantly. It breeds in the high north, chiefly within the Arctic Circle, its nest being placed on the ground, usually under a bush near the margin of a lake, and the eggs 6 to 8 in number are usually deposited late in June or early in July, and are greyish buff with a faint greenish tinge, and measure about 2·17 by 1·51.

ŒDEMIA, Fleming, 1822.

867. VELVET SCOTER.

ŒDEMIA FUSCA.

Œdemia fusca (Linn.), Syst. Nat. i. p. 196 (1766); (Naum.) xii. p. 123 Taf. 313; (Hewitson), ii. p. 419, pl. cxvi. fig. 2; Gould, B. of E. v. pl. 377; id. B. of Gt. Brit. v. pl. 29; Dresser, vi. p. 657, pl. 448. Salvadori, Cat. B. Br. Mus. xxvii. p. 406; Tacz. F. O. Sib. O. p. 1183; Seebohm, B. Jap. Emp. p. 250; Saunders, p. 467; Lilford, vii. p. 133, pl. 56.

Grande Macreuse, French; *Orcho-marino*, Ital.; *Sammetente*, German; *Groote Zeeëend*, Dutch; *Flöielsand*, Dan.; *Sjö-orre*, Norweg.; *Svärta*, Swed.; *Skoarra*, Lapp.; *Pilkasiipi*, Finn.; *Kuro-tori*, Jap.

♂ *ad.* (Sweden). Entire plumage deep glossy black, the under parts rather duller; a small patch below the eye and the speculum white; bill broad, swollen over the nostrils, this portion and the margin of the bill black, the rest orange-yellow; legs pinkish red; iris brown. Gape 2·6, wing 10·7, tail 3·5, tarsus 1·8 inch. The female has the head, neck, and upper parts blackish brown, the latter with pale margins; under parts brighter brown marked with dull white; a large dull white patch in front of and a smaller one behind the eye; bill blackish plumbeous, less swollen than in the male.

Hab. Northern Europe north to Lapland; not found in Iceland, and only once in Greenland; in winter migrating south to the Mediterranean and Caspian; North Asia east to the Yenesei, and also recorded from eastern Siberia and Japan;

but these references may possibly apply to *O. deglandi*, a very closely allied, scarcely differing form, which inhabits North America, or to *O. carbo*.

Frequents the sea-coasts in winter, only resorting to fresh-water lakes and ponds during the nesting season. It swims with ease and is an excellent diver, but on land it is clumsy and heavy. Its food consists of bivalve mollusca in winter, and of aquatic insects, worms, &c., in the summer. Its nest may be either near to, or at some distance from water, and is a depression in the soil under a bush, lined with down intermatted with grass and a few leaves. The eggs, 8 to 10 in number, are usually deposited late in June or early in July, and are uniform ivory-white with a creamy buff tinge, and measure about 2·75 by 1·95.

868. KAMCHATKAN SCOTER.

ŒDEMIA CARBO.

Œdemia carbo (Pall.), Zoog. Ross. As. ii. p. 244 (1811); Salvadori, Cat. B. Br. Mus. xxvii. p. 411; *O. stejnegeri*, Ridgway, p. 112 (1887); Tacz. F. O. Sib. O. p. 1185; (Seebohm), B. Jap. Emp. p. 250.

Differs from *O. fusca*, in having the white mark more behind and not below the eye; the knob on the culmen is more elevated and with anterior outline concave, the top forming a more or less conspicuous projection; sides of bill bright red.

Hab. Kamchatka and North-eastern Siberia; Japan, Mongolia, and China in winter.

In habits it is said not to differ from *O. fusca*, but so far as I can ascertain nothing is known respecting its nidification.

869. BLACK SCOTER.

ŒDEMIA NIGRA.

Œdemia nigra (Linn.), Syst. Nat. i. p. 196 (1766); (Naum.), xii. p. 108, Taf. 312; Gould, B. of E. v. pl. 378; id. B. of Gt. Brit. v. pl. 28; Hewitson, ii. p. 421, pl. cxvi. fig. 1; Dresser, vi. p. 663, pl. 449; Salvadori, Cat. B. Br. Mus. xxvii. p. 401; Tacz. F. O. Sib. O. p. 1189; Saunders, p. 465; Lilford, vii. p. 129, pl. 55.

Macreuse, French; *Orchetto marino*, Ital.; *Pato negro*, Span.; *Negrolla*, Portug.; *Trauer-Ente*, German; *Zwarte-Zeeëend*, Dutch; *Hrafnsönd*, Icel.; *Sort-and*, Dan.; *Svart-and*, Norweg.; *Sjöorre*, Swed.; *Njurkku*, Lapp.; *Merilintu*, Finn.; *Chernaya-ootka*, Russ.

♂ *ad.* (Spain). Entire plumage deep black, the head and neck glossed with purplish, the upper parts with greenish steel-blue; under parts duller and tinged with brown; bill with a large bulb at the base of the upper mandible, a line through which, and a large patch in front are orange-yellow; rest of bill bluish black; legs dark olivaceous; iris dark brown. Gape 2·4, wing 9·5, tail 4·1, tarsus 1·8 inch. The female is dull dark brown, the upper parts with paler margins; sides of the head greyish black; chin and upper throat white; middle of abdomen white marked with brown; bill only slightly swollen at the base of the upper mandible and dull bluish black throughout; legs dull olivaceous.

Hab. Northern Europe, north to Lapland and Iceland; in winter ranging south to the Mediterranean and North Africa; Asia, east to the Taimyr Peninsula.

In the summer it frequents inland waters, but in winter it is essentially a marine species. It flies low but swiftly, and is an excellent diver, like its allies, obtaining its food chiefly by diving. Its call-note in winter is harsh, but in the nesting season the male utters a series of loud flute-like notes, *tü, tü, tü, tü,* which is answered by the female with a harsh *re, re, re, re, re.* Its nest is a mere hollow in the ground, usually under a bush, well lined with grass, moss, and down, and the eggs, 8 to 9 in number, are usually deposited about the middle of June, and are creamy white, smooth in texture of shell, and measure about 2·35 by 1·80.

870. AMERICAN SCOTER.

ŒDEMIA AMERICANA.

Œdemia americana, Swains. and Richardson's Faun. Bor. Am. ii. p. 451 (1831); (Audub.), B. Am. vi. p. 343, pl. 403; Salvadori, Cat. B. Br. Mus. xxvii. p. 404; Seebohm, B. Jap. Emp. p. 248; Tacz. F. O. Sib. O. p. 1191; Ridgway, p. 111.

Kuro-gamo, Jap.

♂ *ad.* (New Brunswick). Differs from *O. nigra* in having the bill decidedly hooked, and the entire upper mandible, including the knob, yellow, on the sides shaded with scarlet-vermilion; under mandible blackish; legs and feet blackish brown; iris dark brown. Culmen 1·70, wing 9·2, tail 4·0, tarsus 1·8 inch.

Hab. Northern America, breeding in the high north and migrating in winter south to New Jersey, the Great Lakes, and California; Kamchatka and North-eastern Asia; migrating in winter south to Corea and Japan.

In habits and nidification it does not differ from *O. nigra*, Its eggs are said to be pale brownish buff, and to measure about 2·55 by 1·80.

871. SURF SCOTER.

ŒDEMIA PERSPICILLATA.

Œdemia perspicillata (Linn.), Syst. Nat. i. p.201 (1766); (Naum.), xii. p. 140, Taf. 314; Gould, B. of E. v. pl. 376; id. B. of Gt. Brit. v. pl. 30; Dresser, vi. p. 669, pl. 450; (Audub.), B. Am. vi. p. 337, pl. 402; Salvadori, Cat. B. Br. Mus. xxvii. p. 412; Tacz. F. O. Sib. O. p. 1188; Ridgway, p. 113; Saunders, p. 469; Lilford, vii. p. 135, pl. 57.

♂ *ad.* (New Brunswick). Entire plumage velvety black; a large patch on the crown, and a large triangular one on the nape pure white; upper mandible bulged into a large lump on each side of the base, and raised centrally nearly to the tooth; space round the nostrils rich red, becoming orange-yellow on the sides; space before and behind this band pure white; tooth pale yellow; a large black patch on each side of the bill, the space between this patch and the feathers orange-yellow and vermilion-red; legs dull pinkish red; iris white. Gape 2·5, wing 9·6, tail 3·6, tarsus 1·8 inch. The female has the crown blackish brown, the sides of head and neck dull brown; on the nape a triangular whitish patch marked with blackish brown; a brownish white patch in front of the eye, and another behind the chin; plumage otherwise dark brown, the upper parts darker and with narrow paler margins; bill less swollen than in the male and blackish plumbeous; legs warm olivaceous; iris greyish.

Hab. Northern America, breeding in the Arctic regions and in winter migrating south to Jamaica, the Carolinas, Ohio River, and Lower California; of accidental occurrence in Britain, Scandinavia, the northern coasts of continental Europe and those of North-eastern Asia.

In general habits it resembles the Velvet Scoter, and like that species obtains its food chiefly by diving. It breeds in Arctic America, its nest being a hollow in the ground, lined with weeds and the dark down of the bird, and the eggs, 6 to 8 in number, resemble those of *O. fusca*, but measure 2·45 by 1·75.

SOMATERIA, Leach, 1819.

872. Steller's Duck.

SOMATERIA STELLERI.

Somateria stelleri (Pall.), Spic. Zool. fasc. vi. p. 35, Tab. v. (1769); (Gould), B. of Gt. Brit. v. pl. 25; (Middend.), Sib. Reise, p. 234, Taf. 23, figs. 3, 5 (eggs); Newton, P.Z.S. 1861, p. 400, pl. xxxix. fig. 4 (egg); Dresser, vi. p. 649, pl. 447; (Salvadori), Cat. B. Br. Mus. xxvii. p. 419; (Tacz.), F. O. Sib. O. p. 1200; Saunders, p. 463; Lilford, vii. p. 127, pl. 54; (Ridgway), p. 108; *Anas dispar*, Sparrm. Mus. Carls. tabb. 7 and 8 (1786); Naum. xii. p. 240, Taf. 320; (Gould), B. of E. v. pl. 372; (Audub.), B. Am. vi. p. 368, pl. 407.

Scheck-ente, German; *Alförrådare*, Swed.

♂ *ad.* (Norway). Top and sides of head and a collar encircling the back of the neck silky white; a narrow line across the forehead, a loral spot, and an occipital patch dull olive-green; feathers of the throat, and a line dividing the white collar and joining another broad band which encircles the neck, glossy blue-black tinged with purple, as are also the feathers round the eye, and a spot on each side of the nape; back purplish blue-black; scapulars elongated, blue-black, margined with white; wing-coverts white; speculum bluish purple tipped with white; innermost secondaries sickle-shaped and tipped with white; quills and tail blackish brown; under parts deep ferruginous inclining to buff on the upper breast and flanks; middle of breast, abdomen, and under tail-coverts black; sides of upper breast marked with two distinct purplish blue spots; bill plumbeous, the nail lighter; legs and feet greyish brown, the webs darker; iris brown. Culmen 1·45, wing 8·4, tail 3·5, tarsus 1·2 inch. The female has the head olive-brown tinged with rufous and marked with black; upper parts dark brown mottled with rufous; breast rusty brown spotted and barred with dusky; abdomen sooty brown; speculum duller than in the male; falcate inner secondaries dusky.

Hab. Northern Siberia; Kamchatka, south to the Kurile Islands in winter; Alaska; the Arctic coasts of North America to Davis Strait, but not common; Western Greenland, rare; of rare occurrence in Great Britain, the north coast of France, and Denmark, and in the Baltic, but commoner off the north-east coasts of Norway, and a regular winter visitant to the Varanger Fjord.

In general habits it resembles the Eiders. It breeds in Northern Siberia late in June, its nest being a deep depression in the moss of the tundra, well lined with down. The eggs, 7 to 9 in number, are similar in tone of colour to those of *S. spectabilis* but smaller, measuring 2·51 by 1·64.

873. EIDER.

SOMATERIA MOLLISSIMA.

Somateria mollissima (Linn.), Syst. Nat. i. p. 198 (1766); (Naum.), xii. p. 252, Taf. 321; Hewitson, ii. p. 414, pl. cxv. fig. 3; Gould, B. of E. v. pl. 374; id. B. of Gt. Brit. v. pl. 26; Dresser, vi. p. 629, pl. 445; Salvadori, Cat. B. Br. Mus. xxvii. p. 425; Saunders, p. 459; Lilford, vii. p. 123, pl. 52.

Morillon, Eider, French; *Eidergans*, German; *Eidereend*, Dutch; *Edderand*, Dan.; *Ejdergås, Estegg*, Norweg.; *Ejder*, Swed.; *Ædur*, Icel.; ♂ *Bliki, Handa*, Lapp.; *Haahka*, Finn.; *Gagka Normota*, Russ.

♂ *ad.* (Norway). Crown, forehead, and a wedge half-way to the nostrils black; a white line on the sides of the crown, nape and hind portion of the auricular region pale sea-green; cheeks, sides of neck, back, lesser and median tail-coverts white; lower back, rump, upper tail-coverts, and greater wing-coverts black; quills blackish brown, the inner secondaries sickle-shaped and white; tail greyish brown; throat white tinged with yellow on the lower part; upper breast pale stone-colour; rest of under parts black with a white patch on each side of the rump; bill dull yellowish olivaceous; legs light olive-green; iris brown. Culmen 2·3, wing 11·6, tail 4·0, tarsus 1·75 inch. The female is dark brown barred and marked with sandy rufous, the sides of face and throat sandy, speckled with black; two white alar bars; middle of abdomen greyish brown with traces of black cross-bars. In the summer the male is chiefly dark brown or blackish, retaining the white only on the wing-coverts.

Hab. Europe, in the northern portions up to the northern end of the Gulf of Bothnia and the Arctic Ocean; Iceland; the Færoes; Spitsbergen; occurs in winter on the coasts of continental Europe and has been obtained as far south as the Mediterranean; Northern Asia east to the Yenesei. The form inhabiting Greenland and eastern Arctic America (*S. borealis*, Brehm) is doubtfully distinct. On the Atlantic coasts of N. America it is replaced by *S. dresseri*, Sharpe, differing but little in having the angle on the side of the forehead broad and rounded, and the black of the head bordered beneath by pale green for nearly its entire length.

Inhabits the sea-coasts, being but seldom found inland, and feeds on crustaceans, mussels, marine insects, &c., which it obtains chiefly by diving. The call-note of the male is a tolerably loud *ah-oh*, and that of the female a loud *crock-crock*. It breeds chiefly on islands off the sea-coast, and being in many places protected during the breeding season, is then very tame and confiding. The nest is a mere depression on the soil under a juniper bush or a stone, lined with twigs, bits of seaweed, and down, and it readily nests in places especially prepared for it, and its eggs and down are valuable commodities in Iceland and Norway. The eggs, 5 to 7, sometimes 8, in number, are greenish grey, and measure about 3·0 by 2·0.

874. PACIFIC EIDER.

SOMATERIA V. NIGRUM.

Somateria v. nigrum, G. R. Gray, P.Z.S. 1855, p. 212, pl. cvii. ; Elliot, Illustr. Am. B. pl. 48 ; Tacz. F. O. Sib. O. p. 1192 ; Salvadori, Cat. B. Br. Mus. xxvii. p. 430 ; Ridgway, p. 110.

♂ *ad.* (N.W. America). Differs from *S. mollissima* in having a V-shaped black mark on the throat like *S. spectabilis* and the bill bright orange or orange-red with the tip paler. Culmen 2·0, wing 12·20, tail 5·5, tarsus 2·15 inch. The female closely resembles that of S. *mollissima* but is as a rule larger.

Hab. North-west America, east to the Great Slave Lake; North-east Asia; the coasts of the Arctic Ocean; Kamchatka and the Commander Islands.

In habits it is said not to differ from *S. mollissima*, and its eggs also resemble those of that species, being according to Mr. Nelson light olive-drab, oval in form, and measure from 2·87 by 2·03 to 3·12 by 2·04. Unlike our European Eider, however, the Pacific Eider does not breed in colonies, but in single pairs, nesting in salt marshes close to a pond or a tide-creek, and not often in close proximity to the sea-shore, and the eggs are deposited in June.

875. KING EIDER.

SOMATERIA SPECTABILIS.

Somateria spectabilis (Linn.), Syst. Nat. i. p. 195 (1766) ; (Naum.), xii. p. 285, Taf. 322, 323 ; Hewitson, ii. p. 417, pl. cxv. figs. 1, 2 ; Gould, B. of E. v. pl. 375 ; id. B. of Gt. Brit. v. pl. 27 ; (Audub.), B. Am. vi. p. 347, pl. 404 ; Dresser, vi. p. 643, pl. 446 ; Salvadori, Cat. B. Br. Mus. xxvii. p. 432 ; Tacz. F. O. Sib. O. p. 1195 ; Saunders, p. 461 ; Lilford, vii. p. 125, pl. 53 ; Ridgway, p. 110.

Canard à tête grise, French.; *Prachtente*, German; *Pragtedder*, Dan.; *Erkonge*, Norweg.; *Prakt-ejder*, Swed.; *Pukskahaahka*, Finn.; *Pistrak*, Russ.

♂ *ad.* (Greenland). Crown and nape pale ashy blue, sides of head pale green ; a large protuberance on the upper mandible over the middle of which a black line is continued to the gape ; a spot under each eye and a large V-shaped mark from the chin to the sides of the upper throat black ; upper back, central lesser wing-coverts, and a large patch on each side of the rump white ; rest of upper parts, wings, tail, and under parts below the breast black ; inner secondaries elongated and curved ; upper throat white ; lower throat and upper breast warm cream-coloured ; bill red, the nail yellowish ; naked protuberance bright orange ; legs dull orange-reddish, the webs blackish ; iris brown. Gape 2·35, wing 10·3, tail 3·5, tarsus 1·7 inch. The female differs from that of *S. mollissima* in being smaller, darker, and in having the central line of feathers on the upper mandible extending quite down to the nostrils.

Hab. The Arctic portions of Europe, Asia, and America, straying south in winter, when it occurs rarely in Great Britain, Scandinavia, North Russia, North Germany; rare in Spitsbergen; has once been obtained near Boulogne and once as far south as Venice ; in America it ranges in winter south to New Jersey and the Great Lakes.

In habits and nidification it resembles *S. mollissima.* It breeds in Greenland, Novaya Zemlya, the Arctic shores of Siberia and Arctic America, and its eggs, usually 6 in number, are similar to those of *S. mollissima* in shape and colour, but are smaller, measuring about 2·52 by 1·77.

876. SPECTACLED EIDER.

SOMATERIA FISCHERI.

Somateria fischeri (Brandt), Mem. As. St. Petersb. v. pp. 6, 10, 14, pl. 1, figs. 1, 4 (1847) ; (Elliot), Ill. B. N. Am. pl. 47 ; (Tacz.), F. O. Sib. O. p. 1198 ; (Nelson), Rep. Nat. Hist. Coll. Alaska, p. 76, pl. v. fig. 1 ; (Salvadori), Cat. B. Br. Mus. xxvii. p. 422 ; (Ridgway), p. 198.

♂ *ad.* (N.W. America). Space round the eye dull satiny white, bordered anteriorly and posteriorly by a vertical black line ; fore-head and lores covered with stiffened feathers, white anteriorly shading into olive-buff and then into greenish buff ; crown and occiput covered with a hood of stiff pendant light olive-green feathers ; quills, tail, and larger wing-coverts brown ; throat, neck, and upper parts with a patch on each side of the rump yellowish white ; rump and under parts dark smoky grey ; bill orange ; legs dull olive-brown, but dull yellowish on the front of the tarsus ; iris milky white. Culmen 1·0, wing 10·0, tail 3·0, tarsus 1·7 inch. The female is barred with light fulvous and black, the abdomen plain greyish brown ; head and neck light greyish buff finely streaked with dusky except on the throat; wings greyish brown, the greater coverts and secondaries indistinctly tipped with whitish; bill dull blue; legs and feet dull yellowish brown.

Hab. North Pacific; the coast of Alaska from Norton Sound to Port Barrow on the American side of Bering Sea, and the Chukchi peninsula in 67° N. lat. on the Asiatic side.

In general habits it does not appear to differ from its allies. In the summer its food consists of small crustacea, grass seeds, and such other food as the brackish pools afford. Its nest is a slight hollow in some dry grassy spot close to a pond on the marsh, well lined with grass; and the eggs, 6 to 8 or 9 in number, are deposited about the middle of June, and are described by Mr. E. W. Nelson as being light olive-drab in colour, and small for the size of the bird, extremes measuring 2·82 by 1·81 and 2·60 by 1·87.

In August the male assumes a plumage much like that of the female, as do all the males of the Eiders.

ERISMATURA, Bonap., 1832.

877. WHITE-HEADED DUCK.

ERISMATURA LEUCOCEPHALA.

Erismatura leucocephala (Scop.), Ann. i. Hist. Nat. p. 65 (1769); (Gould), B. of E. v. pl. 383; Dresser, vi. p. 677, pl. 451; Salvadori, Cat. B. Br. Mus. xxvii. p. 442; Blanf. F. Brit. Ind. Birds, iv. p. 466; *E. mersa*, Bp. Comp. List. p. 59 (1838); (Naum.), xii. p. 149, Taf. 315.

Canard couronné, French; *Pato-tarro*, Span.; *Gobbo rugginoso*, Ital.; *Ruderente*, German; *Savka*, Russ.

♂ *ad.* (Transylvania). Crown black; forehead, sides of head to above the eye, chin, and nape pure white; neck black dotted with buffy brown; lower neck to upper breast, and upper back chestnut-red, the two former delicately barred with black; back, scapulars, and rump warm ochreous buff, the last darker, and all vermiculated with blackish grey; secondaries and larger wing-coverts similar but more greyish buff; lesser coverts dull ashy and slightly vermiculated; tail blackish, long and stiff; under parts below the breast buffy white, obscurely marked with reddish brown; flanks dull chestnut-brown tinged with buff, vermiculated with dark brown; bill pale ultramarine, and much swollen at the base; legs blackish plumbeous; iris dark brown. Culmen 1·9, gape 1·82, wing 6·3, tail 4·3, tarsus 1·35 inch. The female is more rufous in colour; chin, lower cheeks, and a stripe running under the eye towards the nape white; rest of head blackish tinged with rufous; upper parts and breast lacking the blackish bars; beak dull plumbeous; otherwise like the male.

Hab. Southern Europe, accidental in Germany and Northern France; Northern Africa; Central Asia east to Turkestan, south in winter to India.

Appears to affect fresh water and brackish lagoons in preference to the sea, and usually when alarmed seeks safety by diving in preference to taking wing. It breeds amongst the reeds and aquatic plants, depositing in June 7 to 9 eggs, dull white in colour, very coarse in texture of shell, and measuring about 2·75 by 1·95.

MERGUS, Linn., 1766.

878. GOOSANDER.

MERGUS MERGANSER.

Mergus merganser, Linn. Syst. Nat. i. p. 208 (1766); Naum. xii. p. 358, Taf. 326; Hewitson, ii. p. 439, pl. cxviii. fig. 3; Gould, v. pl. 384; Dresser, vi. p. 685, pl. 452; David and Oust. Ois. Chine. p. 510; Saunders, p. 471; Lilford, vii. p. 137, pl. 58; Tacz. F. O. Sib. O. p. 1203; *M. castor*, Linn. Syst. Nat. i. p. 209 (1766); Gould, B. of Gt. Brit. v. pl. 34; (Salvadori), Cat. B. Br. Mus. xxvii. p. 472; (Blanf.), F. Brit. Ind. Birds, iv. p. 469; *M. comatus* (Salv.), tom. cit. p. 475 (1895).

Grand Harle, French; *Smergo maggiore*, Ital.; *Grosser Säger*, German; *Groote Zaagbek*, Dutch; *Stor Skallesluger*, Dan.; *Körfågel*, Norweg.; *Storskrake*, Swed.; *Kussa-koalsi*, Lapp.; *Iso-koskelo*, *Uu-koskelo*, Finn.; *Bolshoy-Krahal*, Russ.; *Gulönd*, Icel.; *Kawaaisa*, Jap.

♂ *ad.* (Archangel). Head and upper neck glossed with green, the occipital feathers elongated; lower neck and upper back white, the latter marked with black, becoming with the outer webs of scapulars glossy black; lower back, rump, upper tail-coverts, and tail dark ashy, the last darkest; primaries ashy black; secondaries white margined with black, the innermost black; primary coverts, edge and base of wing blackish grey; rest of wing-coverts and under parts white, the breast and abdomen tinged with warm reddish buff; bill deep vermilion, the ridge of upper mandible and tooth blackish; legs vermilion; iris deep reddish brown. Culmen 2·4, wing 11·0, tail 5·0, tarsus 1·9 inch. The female has the crown, nape, and upper neck rusty red, the lores and round the eye dark brown; upper parts brown, greyish on the back; chin, lower neck, and under parts white, the flanks marked with pale slate-grey; wings as in the male.

Hab. High north of Europe and Asia in the breeding season, in winter visiting Britain, Central and Southern Europe to the Mediterranean; Central Asia east to Japan and Mongolia; China and India in winter. The American form, *M. americanus*, Cass, differs very slightly in having a black bar across the wings at the base of the greater coverts.

Frequents fresh water during the breeding season, being found on the sea-coast only in the winter. Its cry is loud and harsh, chiefly uttered when the bird is on the wing. It feeds principally on fish, but also eats water-insects and larvæ. It usually nests in a hollow tree, and readily takes to a nest-box, but sometimes on the ground under a stone, the nest being well lined with down, and late in April or early in May deposits 8 to 12 eggs, which are warm yellowish white, smooth in texture, and measure about 2·65 by 1·81.

879. RED-BREASTED MERGANSER.

MERGUS SERRATOR.

Mergus serrator, Linn. Syst. Nat. i. p. 208 (1766); Naum. xii. p. 333; Taf. 325; Hewitson, ii. p. 437, pl. cxix. fig. 2; Gould, B. of E. v. pl. 385; id. B. of Gt. Brit. v. pl. 35; Dresser, vi. p. 693, pl. 453, David and Oust. Ois. Chine, p. 511; (Salvadori), Cat. B. Br. Mus. xxvii. p. 479; Tacz. F. O. Sib. O. p. 1206; (Blanf.), F. Brit. Ind. Birds, iv. p. 470; (Ridgway), p. 89; Saunders, p. 473; Lilford, vii. p. 139, pl. 59; Seebohm, B. Jap. Emp. p. 258.

Harle huppé, French; *Merganso*, Portug.; *Pato de sierra*, Span.; *Smergo minore*, Ital.; *Mittlere Säger*, German; *Zaagbek*, Dutch; *Toppet-skallesluger*, Dan.; *Siland*, Norweg.; *Småskrake*, *Pracka*, Swed.; *Toppönd*, Icel.; *Vuokta-koalsi*, Lapp.; *Koskelo*, Finn.; *Krahal*, Russ.; *Umi-aisa*, Jap.

♂ *ad.* (Finland). Head and upper neck black glossed with purple and green; coronal and nuchal feathers much elongated; central neck white with a narrow black line behind; back, scapulars, and long inner secondaries black with a purple gloss; rump and upper tail-coverts white vermiculated with black; wing-coverts and secondaries white, the latter bordered with black on the outer web; two black bars across the wing; primaries and tail dark greyish brown; lower neck and upper breast reddish brown streaked with blackish; feathers in front of shoulder white broadly margined with black; under parts very pale warm buff, the flanks white vermiculated with black; bill vermilion, the edge of the mandible and nail dusky; legs vermilion; iris red. Culmen 2·4, wing 9·5, tail 3·1, tarsus 2·0 inch. In the summer the male resembles the female, but is larger, and the abdomen and scapulars are differently coloured. The female has the head and upper neck dull reddish brown; chin and front of neck dull white; upper parts dark ash with paler margins; under parts white, the lower fore neck tinged with grey; flanks sooty grey; in size less than the male.

Hab. Northern Europe generally, up to the North Cape and Iceland; breeds in Scotland and Ireland; in winter to the Mediterranean and North Africa; Northern Asia, in winter to Japan, China, and Northern India; North America, breeding in the far north, and in winter ranging south to Bermuda.

In general habits it resembles the Goosander, and like that bird it is an expert diver and feeds chiefly on fish. It usually nests on the ground, but seldom in a hollow tree, its nest being composed of moss, grass, etc., intermixed with down, and in June it deposits 8 to 12 eggs, which are dull stone-buff or creamy greenish grey, and measure about 2·60 by 1·76.

880. HOODED MERGANSER.

MERGUS CUCULLATUS.

Mergus cucullatus, Linn. Syst. Nat. i. p. 207 (1766); Gould, B. of E. v. pl. 386; (id.), B. of Gt. Brit. v. pl. 36; Wils. Am. Orn. viii. p. 79, pl. 69, fig. 1; Dresser, ix. p. 296, pl. 696; (Salvadori), Cat. B. Br. Mus. xxvii. p. 468; Audub. B. Am. vi. p. 402, pl. 413; Saunders, p. 477; Lilford, vii. p. 144, pl. 61; Ridgway, p. 89.

♂ *ad.* (New Brunswick). Forehead dark brown; head with a semicircular compressed crest, white in the middle, broadly margined with black, except behind where the margin is narrow; upper parts brownish black, the scapulars deep black; speculum white crossed by two black bands; primary quills and tail brown; upper neck black; lower neck and under parts white; on each side of the neck two black crescentic bands; flanks reddish brown vermiculated with blackish, under tail-coverts greyish white freckled and vermiculated with warm brown; bill black; feet and legs yellowish brown; iris yellow. Culmen 1·7, wing 7·4, tail 3·8, tarsus 1·25 inch. The female has the crest reddish brown; rest of head, neck, and breast greyish brown, darker above; chin, upper throat, and under parts below the breast white; flanks brown with pale margins.

Hab. North America, north to Alaska, ranging south in winter to Mexico and Cuba; of accidental and very rare occurrence in Greenland, a rare winter straggler to the British Islands.

In habits it resembles its congeners, but is very shy and wary, flies rapidly, and is an expert diver, subsisting chiefly on fish.

It affects fresh water and only visits the sea-coasts in winter when driven by stress of weather from its usual haunts. It nests in hollow trees usually at a considerable height above the ground, and lines the cavity with dry grass, leaves, and plenty of down. The eggs, 5 to 8 in number, are usually deposited in May, and are very round, the shell being remarkably thick and smooth, in colour creamy white, and in size measuring about 2·1 by 1·76.

881. SMEW.

MERGUS ALBELLUS.

Mergus albellus, Linn. Syst. Nat. i. p. 209 (1766); Wils. Am. Orn. viii. p. 126, pl. 71; Naum. xii. p. 314, Taf. 324; Audubon, B. Am. vi. p. 408, pl. 414; Gould, B. of E. v. pl. 387; id. B. of Gt. Brit. v. pl. 37; Dresser, vi. p. 699, pls. 454, 455; Salvadori, Cat. B. Br. Mus. xxvii. p. 464; Tacz. F. O. Sib. O. p. 1208; Blanf. F. Brit. Ind. Birds, iv. p. 467; Seebohm, B. Jap. Emp. p. 259; Saunders, p. 475; Lilford, vii. p. 141; pl. 60; Ridgway, p. 90.

Petit Harle huppé, French; *Pesciajola*, Ital.; *Kleiner Säger*, German; *Nonnetje*, Dutch; *Hvid-skallesluger*, *Nonne*, Dan.; *Hvid-Fiskand*, Norw.; *Salskrake*, Swed.; *Uinelo*, *Ungilo*, *Herna* Finn.; *Lutok*, *Paganka*, Russ.; *Nihenna*, Hindu.; *Miko-aisa* Jap.

♂ *ad.* (Holland). General plumage white except as follows: lores and a large patch round the eye, a nuchal patch, middle of the back, a narrow line on the upper breast and a mark close to the base of the wing on the sides deep black; primaries blackish; secondaries, except the inner ones and primary coverts black, tipped with white; scapulars tipped with black; rump blackish; upper tail-coverts greyish brown, tipped with dull white; flanks vermiculated with black; bill and legs pale plumbeous, the nail paler; iris silvery white. Culmen 1·25, wing 7·6, tail 3·8, tarsus 1·3 inch. The female has the crown, nape, and hind neck reddish brown; lores and space round the eye dark brown; upper parts brown, greyish on the upper back; lower parts white, the upper breast washed with slate-grey; wings duller than in the male; flanks washed with greyish brown. In the summer the male resembles the female but has the upper parts darker; the facial patch, and the semilunar mark on the sides of the breast black.

Hab. North Europe and Asia, north into Finnish Lapland and Kamchatka, in winter ranging south to Britain and the coasts of Europe to the Mediterranean, and in Asia to Japan, Corea, China, and India; of rare and occasional occurrence in North-east America.

In habits it resembles *M. serrator*, but appears to frequent fresh water more than that species. It is also an expert diver, and feeds on small fish, aquatic insects, small frogs, etc. It breeds in hollow trees, lining the nest hollow with down, and in June deposits 6 to 8 eggs, which resemble those of the Wigeon, but are much more polished in surface of shell, and measure about 2·05 by 1·48.

SPHENOCERCUS, G. R. Gray, 1840.

882. Siebold's Green Pigeon.

SPHENOCERCUS SIEBOLDI.

Sphenocercus sieboldi (Temm.), Pl. col. pl. 549 (1835); (Temm. and Schlegel), Faun. Jap. Aves, p. 102, pl. 60D; (Seebohm), B. Jap. Emp. p. 163; Salvadori, Cat. B. Br. Mus. xxi. p. 12.

Awo-bato, Jap.

♂ *ad.* (Japan). Head, neck, and entire breast bright apple-yellow, the crown, nape, and hind neck washed with green; upper parts generally dark parrot-green, the fore part of the back slaty bluish; wing-coverts maroon-red; larger coverts and quills, which are dark slate, margined with yellowish white; outer tail-feathers dark slate, the middle ones like the back; under parts white with a yellowish tinge; flanks dove-blue and green; under tail-coverts yellowish, with green along the middle. Culmen 0·82, wing 7·3, tail 4·75, tarsus 1·0 inch. The female has the yellow portions of the plumage greener, and lacks the maroon-red on the wings.

Hab. Japan only, a summer visitant in the north, resident in the south.

In habits it is said to be exceedingly shy, and frequents the moderately high bluffs near the sea-shore, on the sands of which latter it frequently alights. Its note is a long and varied *coo*. Respecting its nidification I find nothing on record. This species is an insular form of *S. sphenurus* (Gray) which inhabits the Himalayas.

COLUMBA, Linn., 1766.

883. Rock-Dove.

COLUMBA LIVIA.

Columba livia, Bonn. Encycl. Méthod. i. p. 227 (1790); Naum. vi. p. 186, Taf. 150; Hewitson, i. p. 274, pl. lxvii. fig. 3; Gould, B. of E. iv. pl. 245; id. B. of Gt. Brit. iv. pl. 3; Dresser, vii. p. 11, pl. 457; Salvadori, Cat. B. Br. Mus. xxi. p. 252; Blanf. F. Brit. Ind. Birds, iv. p. 30; Saunders, p. 483; Lilford, iv. p. 89, pl. 41.

Colombe biset, French; *Pomba*, Portug.; *Paloma silvestre*, Span.; *Piccione selvatico*, Ital.; *Felsentaube*, German; *Klippedue*, Dan. and Norweg.; *Klippdufva*, Swed.; *Kesykyyhkynen*, Finn.; *Golub*, Russ.; *Hamam el Berri*, Moor.; *Hamam*, Arab.

♂ *ad.* (England). Head, neck, and upper parts slaty blue, the back and wings paler, the head and neck darker and glossed with green; lower neck on sides and in front glossed with coppery purple; two bands across the wings, and terminal portion of tail black; rump white; under parts dove-blue tinged with slate; bill reddish brown; legs reddish; iris orange. Culmen 0·8, wing 8·5, tail 4·6, tarsus 1·2 inch. Female rather smaller and duller.

Hab. The western Palæarctic area, north to the Færoes, but not found in Scandinavia or in many parts of Eastern Europe; North Africa; Asia east to Afghanistan and Northern India.

This, the original stock from which our tame Pigeons have sprung, inhabits rocky localities on the sea-coast, and is numerous in several parts of the rocky coasts of Britain. Its flight is very swift, and performed with a whistling sound. Its note is a *coo-roo-coo* quickly repeated, the last syllable prolonged; and its food consists of grain of various kinds, seeds of wild plants, roots of grass, snails, etc. The nest is composed of plant-stems and grass, and is placed on the shelf of a rock in a cave, and two broods are usually reared in the year, one in about April and the second in September. The eggs, like those of all the Pigeons, are 2 in number, pure white, and measure about 1·59 by 1·07.

In Africa there are two forms which have been recognized by Count Salvadori as species, *C. gymnocyclus*, Gray, from Senegal, and *C. schimperi*, Bp., from Egypt, Nubia, and Palestine, which are barely separable from *C. livia*.

884. SUBSP. COLUMBA INTERMEDIA.

Columba intermedia, Strickl. Ann. and Mag. N. H. xiii. p. 39 (1844); David and Oust. Ois. Chine, p. 384; Gould, B. of A. vi. pl. 56; Seebohm, B. Jap. E. p. 160; Blanf. F. Brit. Ind. Birds, iv. p. 29; Salvadori, Cat. B. Br. Mus. xxi. p. 259.

Kabutar, Hindu.; *Kawara-bato*, Jap.

ad. Differs from *C. livia* in having the rump slaty grey, not white.

Hab. Southern Persia, India, Ceylon, China, and Japan.

Frequents rocks and cliffs, old buildings, walls, &c., and is found both inland as well as on the coasts. In general habits it does not differ from *C. livia*. It breeds in Northern India from December to May, later in the South, and nests in holes in cliffs, walls, temples, tombs, or wells, depositing 2 white eggs, like those of *C. livia*, which measure about 1·45 by 1·12.

885. HILL ROCK-DOVE.

COLUMBA RUPESTRIS.

Columba rupestris, Bp. Consp. Gen. Av. ii. p. 48 (1857); Pall. Zoogr. Ross. As. i. p. 560, Tab. 35; Gould, B. of A. vi. pl. 54; David and Oust. Ois. Chine, p. 385; Salvadori, Cat. B. Br. Mus. xxi. p. 250; Blanf. F. Brit. Ind. Birds, iv. p. 30; Tacz. F. O. Sib. O. p. 729.

♂ *ad.* (Central Asia). Differs from *C. livia* in having a broad, white band across the middle of the tail, in being slightly paler both above and below, and the breast tinged with lilac; bill black; feet lobster-red; iris golden red. Culmen 0·64, wing 9·0, tail 5·1, tarsus 1·05 inch.

Hab. Central Asia, the Himalaya, Tibet, South-eastern Siberia, Corea, Northern and Eastern China.

Inhabits the rocky portions of the mountains in the interior of the country, but in general habits does not differ from *C. livia*. It usually nests in the cliffs, but when no suitable place is near it nests in buildings, and in March deposits 2 white eggs, which measure about 1·42 by 1·02.

886. WHITE-BACKED DOVE.

COLUMBA LEUCONOTA.

Columba leuconota, Vig. P.Z.S. 1831, p. 23; Gould, Cent. Himal. B. pl. 59; Salvadori, Cat. B. Br. Mus. xxi. p. 249; Blanf. F. Brit. Ind. Birds, iv. p. 32.

♂ *ad.* (India). Head dark slate-grey or plumbeous; neck, lower back, and under parts white; upper back, scapulars, inner secondaries ashy brown; rest of wings above dove-blue, the wings crossed by three blackish brown bars; rump, upper tail-coverts, and tail blackish, the last crossed by a broad, white band which is in the middle of the central, but close to the end of the outermost feathers; lower abdomen tinged with dove-blue, the under tail-coverts pale dove-blue; bill and claws horny black; feet bright light red; iris yellow. Culmen 1·0, wing 9·6, tail 5·3, tarsus 1·2 inch. Female similar but somewhat duller in colour.

Hab. Himalayas from Gilgit to Bhutan; Tibet; Kan-su.

Is an inhabitant of the higher mountain ranges at from 10,000 to 14,000 feet altitude, where it inhabits the most unapproachable and desolate rocks, avoiding woods and never perching on a tree, only visiting the alpine meadows and Tangut villages in search of food. Nothing is known respecting its nidification except that it nests amongst inaccessible crags in Kashmir in August, and in Mongolia in May.

887. STOCK-DOVE.

COLUMBA ŒNAS.

Columba œnas, Linn. Faun. Suec. p. 75 (1761); Gmel. Syst. Nat. i. p. 769 (1788); Naum. vi. p. 215, Taf. 151; Hewitson, i. p. 273, pl. lxvii. fig. 2; Gould, B. of E. iv. pl. 244; id. B. of Gt. Brit. iv. pl. 2; Dresser, vii. p. 23, pl. 458; Salvadori, Cat. B. Br. Mus. xxi. p. 261; Saunders, p. 481; Lilford, iv. p. 85, pl. 40.

Colombe, French; *Paloma zura*, Span.; *Colombella*, Ital.; *Hohltaube*, German; *Kleine-Boschduif*, Dutch; *Skovdue*, Dan. and Norweg.; *Skogsdufva*, Swed.; *Sinikyyhka*, Finn.; *Klintuch*, Russ.

♂ *ad.* (England). Head, neck, and upper parts generally blue-grey with a slate tinge, the rump, upper tail-coverts and wing-coverts paler and bluer; sides of and hind-neck glossed with metallic green; a patch of blackish grey on some of the inner secondaries and wing-coverts; tail at base bluish grey, then light grey, the terminal portion dark plumbeous; under parts blue-grey, the breast vinous red; bill red at the base, becoming yellow towards the tip, the soft portion at the base of the upper mandible greyish; iris red; legs pinkish red. Culmen 0·85, wing 8·45, tail 4·7, tarsus 1·1 inch. The female is somewhat smaller, and duller in colour.

Hab. Europe generally, up to about 61° N. lat.; North-west Africa; Asia Minor, and Asia east to Turkestan.

In habits it differs from the Rock-Dove in that it affects woods and groves inland. It feeds on grain and seeds of various kinds, beech-nuts, acorns, and blueberries. Its note is a loud guttural, rumbling note. Sometimes two broods are reared in the year, the first eggs being deposited late in March or early in April, and it nests in hollow trees, holes in the ground, old ivy, and even in old buildings. The eggs, 2 in number, are pure white, and measure about 1·51 by 1·6.

888. INDIAN STOCK-DOVE.

COLUMBA EVERSMANNI.

Columba eversmanni, Bp. Compt. Rend. xliii. p. 838 (1856); Dresser, vii. p. 26, pl. 698; Salvadori, Cat. B. Br. Mus. xxi. p. 264; Blanf. F. Brit. Ind. Birds, iv. p. 31; *C. fusca*, Severtz. Turk. Jevot. p. 68 (1873 nec. Müll.); Tacz. F. O. Sib. O. p. 732.

Koek-Koepteri, Tekke; *Kügan*, Turki; *Kamar-Kular*, Hindu.

♂ *ad.* (India). Differs from *C. œnas* in being smaller and paler; head tinged with vinaceous; rump whitish grey, nearly white; tail with the grey band nearly obsolete; the metallic feathers on the neck glossed with coppery chestnut; legs and feet yellowish fleshy; bill pale yellowish green, base of lower mandible and gape slaty; iris dark yellow. Culmen 0·75, wing 7·75, tail 4·5, tarsus 1·0 inch. Female similar but a little smaller.

Hab. Transcaspia; Afghanistan; Turkestan; South-western Siberia; North-west India in winter.

In general habits this species does not differ from *C. œnas*. It nests in hollow trees and holes in the ground; in Transcaspia frequently in colonies in holes and cracks in the steep river-banks, and late in April deposits 2 eggs, which resemble those of *C. œnas*, but are rather smaller.

889. CANARIAN DOVE.

COLUMBA LAURIVORA.

Columba laurivora, Webb and Berthelot, Orn. Canar. p. 26, pl. 3, lower fig. (1841); Dresser, vii. p. 31, pl. 460; Salvadori, Cat. B. Br. Mus. xxi. p. 297.

Rabiblanco, in the Canaries.

♂ *ad.* (Canaries). Head, neck, and back dull slate-blue, the crown and nape glossed with green, the sides of the neck with purplish red and green; upper surface of wings brownish slate; quills dark brown; tail pale brownish ash-grey, becoming paler towards the middle, and greyish white at the tip; throat-feathers reddish tipped with green; rest of under parts coppery red, the under tail-coverts slate-blue; bill white, but pink at the base; legs dark red; iris yellowish. Culmen 1·2, wing 8·6, tail 6·2, tarsus 1·5 inch. Female similar.

Hab. The islands of Gomera and Palma, Canaries.

Is peculiar to the Canaries, and is essentially a forest bird, frequenting the wilder and less accessible parts of the islands of Gomera and Palma, where it feeds on laurel berries and tender buds, grain, &c. It breeds in the forests, and in May deposits a single egg, which is pure white, and measures about 1·68 by 1·12.

890. Bolle's Pigeon.

COLUMBA BOLLII.

Columba bollii, Godman, Ibis, 1872, p. 217 ; Dresser, vii. p. 29, pl. 459 ; Kœnig, J. f. O. 1890, p. 441, Taf. viii. fig. 12 (egg) ; Salvadori, Cat. B. Br. Mus. xxi. p. 297.

Paloma turquesa, *Torcaza*, in the Canaries.

♂ *ad.* (Teneriffe). Differs from *C. laurivora* in being darker and bluer above, the throat down to the breast slaty blue, slightly glossed with green, the breast and under parts deep vinous red, the flanks, lower abdomen, and under tail-coverts deep bluish slate ; tail blackish, broadly subterminated with dark dove-blue, and finally tipped with dusky slate ; bill red, the tip white ; legs, iris, and edge round the eye coral-red. Culmen 1·0, wing 8·2, tail 6·2, tarsus 1·2 inch.

Hab. The islands of Teneriffe, Palma, and Gomera (Canaries).

Like the preceding species, it inhabits the forests and woods, and is shy and retiring in its habits. It feeds on berries of various kinds, chiefly those of the laurel, and on grain. The nest, which is placed in a laurel or tree heath, is constructed of twigs, lined with finer ones, and the single egg, which is laid in February, March, or April, is pure white, and measures about 1·69 by 1·18.

891. Madeiran Dove.

COLUMBA TROCAZ.

Columba trocaz, Heineken in Brewst. Journ. Sc. 1829, p. 228 ; Jardine and Selby, Ill. Orn. ii. pl. 98 ; Dresser, vii. p. 33, pl. 461 ; Salvadori, Cat. B. Br. Mus. xxi. p. 289.

Pombo trocaz, in Madeira.

♂ *ad.* (Madeira). Dove-blue, somewhat paler on the head, fore-neck, lower back, rump, and under parts ; feathers on the sides and back of neck tipped with silvery grey ; hind-neck and fore-back glossed with green and purple ; primary coverts and quills slaty black, the latter with narrow grey margins ; tail dark plumbeous slate with a broad subterminal slate-blue band ; breast vinous red ; bill and bare space round the eye coral-red, the former tipped with blackish ; legs coral-red ; iris straw-yellow. Culmen 1·0, wing 9·2, tail 7·4, tarsus 1·38 inch. Female similar.

Hab. Madeira.

In habits it does not differ from its allies, and like them lays a single white egg in a nest made of twigs, which is placed in a tree, usually a laurel, at a considerable height above the ground. The egg is rather large, measuring 1·98 by 1·20, and fresh eggs may be found at almost all seasons.

892. RING-DOVE OR WOOD-PIGEON.

COLUMBA PALUMBUS.

Columba palumbus, Linn. Syst. Nat. i. p. 282 (1766); Naum. vi. p. 168, Taf. 149; Gould, B. of E. pl. 243; Dresser, vii. p. 3, pl. 454; Salvadori, Cat. B. Br. Mus. xxi. p. 299; Saunders, p. 479; Lilford, iv. p. 87, pl. 39; *C. torquata*, Leach, Syst. Cat. M. and B. Brit. Mus. p. 26 (1816); Gould, B. of Gt. Brit. iv. pl. 1.

Colombe ramier, French; *Pombo torquaz*, Portug.; *Paloma torcaz*, Span.; *Colombaccio*, Ital.; *Ringeltaube*, German; *Ringduif*, Dutch; *Ringdue*, Dan. and Norweg.; *Ring-dufva*, Swed.; *Kauluskyyhky*, Finn.; *Wjachir*, *Lesnoi-Golub*, Russ.

♂ *ad.* (England). Head and neck dark dove-blue; mantle browuish grey; wing-coverts dark bluish; quills blackish, the primaries edged with white, and a long white patch on the outer part of the wing; rump, upper tail-coverts, and base of tail dove-blue, the last darker; terminal half of tail black; sides of neck glossed with violet and purple, on each side a large white patch; lower throat, breast, and abdomen rich vinous, merging into pale dove-blue below; bill bright red, becoming yellow towards the tip; legs coral-red; iris straw-yellow. Culmen 1·05, wing 9·4, tail 6·5, tarsus 1·2 inch. Female rather smaller and duller.

Hab. Europe generally, north to about 65° N. lat.; Azores; Madeira; North Africa; Asia east to about Bagdad.

In some of its habits it much resembles *C. œnas*, but never breeds in holes of trees or in the ground; wary and shy, where not molested it becomes remarkably tame, as is the case in the London parks. Its note is a deep *coo-roo-coo-coo* and is generally uttered when the bird is sitting on an elevated perch. Its food consists of grain of various kinds, beech-nuts, acorns, tender shoots of plants, &c. Strictly monogamous, it rears at least two broods in a season, the first eggs being laid in April, and the second pair in June, and eggs have been found as late as September. The nest is a very scanty structure of dry twigs, or else a deserted nest of some other bird is made use of, and the two eggs are pure white, and measuring about 1·56 by 1·18.

893. EASTERN RING-DOVE.

COLUMBA CASIOTIS.

Columba casiotis (Bp.), Consp. Gen. Av. ii. p. 42 (1857); Dresser, ix. p. 299, pl. 697; Salvadori, Cat. B. Br. Mus. xxi. p. 302; (Blanf.), F. Brit. Ind. Birds, iv. p. 34.

Dhanua, Hindu.

♂ *ad.* (Afghanistan). Resembles *C. palumbus*, but differs in having the patches on the sides of the neck ochreous instead of white; bill orange at the tip, whitish at the base; feet red; iris yellowish white.

Hab. Southern Persia, Afghanistan, Central Asia and North-west India.

In habits it does not differ from *C. palumbus.* It breeds in North-west India in May and June, its nest and eggs being similar to those of *C. palumbus*, the latter measuring about 1·6 by 1·1.

894. JAPANESE DOVE.

COLUMBA IANTHINA.

Columba ianthina (Temm.), Pl. Col. 503 (1830); (Seebohm), B. Jap. Emp. p. 165; Salvadori, Cat. B. Br. Mus. xxi. p. 310.

Karasu-bato, Jap.

♂ *ad.* (Japan). General colour slaty black, the crown, back, rump, and wing-coverts glossed with metallic purple, the neck, fore part of back and breast with metallic green; under parts paler and more slaty blue than the upper parts; bill dark bluish; legs reddish; iris brown. Culmen 1·0, wing 9·4, tail 7·0, tarsus 1·2 inch. Female similar but duller.

Hab. Japan and Loo-Choo Islands.

I do not find anything on record respecting the habits of the present species. It is said to nest in trees about five feet from the ground, and in May deposits 2 white eggs.

TURTUR, Selby, 1835.

895. TURTLE-DOVE.

TURTUR COMMUNIS.

Turtur communis, Selby, Nat. Libr. Pigeons, pp. 153, 171 (1835); Blanf. F. Brit. Ind. Birds, iv. p. 42; Saunders, p. 485; Lilford, iv. p. 93, pl. 42; *Columba turtur*, Linn. Syst. Nat. i. p. 284 (1766); Naum.

vi. p. 233, Taf. 152; Hewitson, i. p. 275, pl. lxvii. fig. 4; Gould, B. of E. iv. pl. 246; (Salvadori), Cat. B. Br. Mus. xxi. p. 396; *T. vulgaris*, Eyton, Cat. B. B. p. 32 (1836); Dresser, vii. p. 39, pl. 462; *T. auritus*, G. R. Gray, List of G. of B. p. 38 (1840); Gould, B. of Gt. Brit. iv. pl. 4.

Tourterelle, French; *Rola*, Portug.; *Tortola*, Span.; *Tortora*, Ital.; *Turteltaube*, Germ.; *Tortelduif*, Dutch; *Turteldue*, Dan. and Norweg.; *Turturdufva*, Swed.; *Turturikyyhka*, Finn.; *Gorlitza*, Russ.

♂ *ad.* (England). Head, neck, breast, and flanks bluish ash, the neck and breast washed with rosy vinous; back brownish ash marked with reddish brown; shoulders and most of wing-coverts blackish brown margined with bright rufous; larger and external smallest coverts pale dove-blue; rump dove-blue marked with brown; upper tail-coverts and middle tail feathers clove-brown, the rest blackish brown tinged with blue and broadly tipped with white; on each side of the neck four rows of black feathers tipped with white; rest of under parts white; beak brown; legs coral-red; iris reddish brown; bare skin round the eye red. Culmen 0·8, wing 7·0, tail 4·8, tarsus 0·85 inch. Female similar, but rather smaller and duller. The young bird is browner and duller, and lacks the black and white bars on the sides of the neck.

Hab. Europe generally, north as a straggler to Northern Scandinavia; Madeira and the Canaries; Northern Africa in winter, south to Shoa; Asia east to Yarkand and Kashgar. Is a migrant, arriving in England in May, leaving for the south early in the autumn, and in general habits is a timid bird, and frequents woods and groves.

Its note is a rough *turr-turr, turr-turr,* chiefly uttered in the warm weather, and its food consists of grain and seeds of various kinds. Its nest is a very slight platform of twigs, and is placed on a bush or a tree, and its eggs, 2 in number, are usually laid towards the end of May, and are pure white, measuring about 1·20 by 0·91.

896. ISABELLINE TURTLE-DOVE.

TURTUR ISABELLINUS.

Turtur isabellinus, Bp. Compt. rend. xliii. p. 942; Dresser, vii. p. 49, pl. 464, fig. 1; Salvadori, Cat. B. Br. Mus. xxi. p. 400; *T. sharpii*, Shelley, Ibis, 1870, p. 447; id. B. of Egypt, p. 215, pl. 10, fig. 2.

♂ *ad.* (Egypt). Differs from *T. communis* in being smaller, in having the head, hind neck, and upper parts generally tawny reddish brown, the head paler and ochreous in tinge; wing-coverts broadly margined with warm rufescent ochreous brown; rump and upper tail-coverts dark brown broadly margined with tawny brown; tail without any blue tinge; chin and upper throat pale brownish ochreous, gradually fading into deep coppery pink, and on the lower abdomen and under tail-coverts into white. Culmen 0·7, wing 6·0, tail 4·3, tarsus 0·8 inch.

Hab. North-east Africa, north to Cairo; of doubtful occurrence in Asia Minor.

In habits and nidification this species does not differ from *T. communis*, of which it is a desert form.

897. EVERSMANN'S TURTLE-DOVE.

TURTUR FERRAGO.

Turtur ferrago (Eversm.), Add. Pall. Zoogr. Ross. As. fasc. iii. p. 17 (1842); Salvadori, Cat. B. Br. Mus. xxi. p. 401; Blanf. F. Brit. Ind. Birds, iv. p. 41.

♂ *ad.* (Turkestan). Differs from *T. communis* in being larger, with the edges of the scapulars and upper wing-coverts more rufous, the black feathers on the sides of the neck tipped with dove-grey and not with white, and the tips of the tail-feathers are sometimes very pale grey, though generally pure white. Culmen 0·75, wing 7·6, tail 5·25, tarsus 1·0 inch.

Hab. Himalaya from Sikhim to Afghanistan; Central Asia; Turkestan and S.W. Siberia; Northern India in winter.

In general habits it does not differ from *T. communis*. It breeds in the Himalaya at from 4,000 to 8,000 feet elevation, from May to August, and lays 2 pure white eggs, which measure about 1·22 by 0·93.

898. CHINESE TURTLE-DOVE.

TURTUR ORIENTALIS.

Turtur orientalis (Lath.), Ind. Orn. ii. p. 606 (1790); Dresser, vii. p. 45, pl. 463; Salvadori, Cat. B. Br. Mus. xxi. p. 403; Blanf. F. Brit. Ind. Birds, iv. p. 40; *T. rupicola* (Pall.), Zoogr. Ross. As. i. p. 566 (1811); David and Oust. Ois. Chine, p. 385; Tacz. F. O. Sib. O. p. 733; Saunders, p. 487; *C. gelastes*, Temm. Pl. Col. 550 (1835); id. Schlegel, Faun. Jap. Aves, p. 100, pl. 60 B; *C. meena*, Sykes, P.Z.S. 1832, p. 149.

Kala-fukhta, Basko-fukhta, Hindu.; *Kiji-bato,* Jap.

♂ *ad.* (Japan). Differs from *T. communis* in being larger and much darker, the forehead dark ashy blue, the rest of head, neck, and upper parts ashy brown, the tips of the black feathers on the sides of the neck, and of the tail-feathers ashy blue and not white; under parts brownish vinous, becoming rosy vinous on the middle of the abdomen; bill brown tinged with vinous on the basal half; legs vinous red; iris orange; eyelids pale blue; edges of eyelids red. Culmen 0·8, wing 7·5, tail 5·7, tarsus 1·1 inch.

Hab. South-eastern Siberia; Mongolia; Manchuria; Corea; Japan; the eastern Himalayas and India, north of 15° N. lat. A rare straggler to Europe, having occurred at least twice in Sweden, and once in England.

In habits it does not differ from *T. communis*, but is a resident throughout most of its range. In India the breeding season is from December to April, and in Dauria late in May or early in June, and the 2 white eggs measure about 1·31 by 0·98.

899. Collared Turtle-Dove.

TURTUR DECAOCTO.

Turtur decaocto (Frivaldsky), Balkanyi Termes. Utaz. p. 30, pl. viii. (1838); ? *T. risorius* (Linn.), Syst. Nat. i. p. 285 (1766 partim); Pall. Zoogr. Ross. As. i. p. 565; Dresser, vii. p. 51, pl. 464, fig. 2; David and Oust. Ois. Chine, p. 387; Blanf. F. Brit. Ind. Birds, iv. p. 46; Seebohm, B. Jap. Emp. p. 162; *T. douraca*, Hodg. in Gray's Zool. Misc. p. 85 (1844 *descr. nulla*); Salvadori, Cat. B. Br. Mus. xxi. p. 430; *T. torquata* (Bogd.), Tr. Sib. Obtsch. Jestestv. xii. p. 9 (1881); Tacz. F. O. Sib. O. p. 736.

Dhor-fakhta, *Perki*, *Panduk*, *Gugi*, Hindu.; *Shirako-bato*, Jap.

♂ *ad.* (Palestine). Head, neck, and breast pale greyish vinous, the crown tinged with blue-grey; upper parts dusty brown, the sides of the rump dove-blue; quills ashy blue at the base, otherwise blackish brown; secondaries and outer coverts dove-blue; middle tail-feathers dusky brown, the rest dove-blue, fading to white towards the tips; a black collar margined with white from the back half round the neck; under parts pale vinous, becoming dove-blue on the lower abdomen and under tail-coverts; flanks washed with blue-grey; bill black; legs and feet pinkish red; iris crimson, orbital skin whitish. Culmen 0·8, wing 7·15, tail 5·7, tarsus 0·95 inch. Sexes alike.

Hab. Turkey, Asia Minor, Asia east to India, Ceylon, China, Mongolia, Manchuria, Corea, Japan, and as far north as the southern Amoor.

Frequents hedges and trees in cultivated localities, and bush and reed jungle, and its note is a deep *kookoo-koo*. Its nest is a slight platform of twigs, and is placed on the ground, and its 2 eggs are pure white, and measure about 1·18 by 0·87. It is said to breed in every month from December to August in India.

900. Senegal Turtle-Dove.

TURTUR SENEGALENSIS.

Turtur senegalensis (Linn.), Syst. Nat. i. p. 283 (1766); Salvadori, Cat. B. Br. Mus. xxi. p. 448; Dresser, vii. p. 55, pl. 465; *T. ægyptiacus*, Lath. Ind. Orn. ii. p. 607 (1790).

♂ *ad.* (Egypt). Head and neck purplish pink; back and scapulars warm brown, becoming clay rufous on the inner wing-coverts; lower back, rump, upper wing-coverts and secondaries greyish plumbeous; primaries blackish; upper tail-coverts and middle tail-feathers greyish brown, the rest bluish grey, becoming blackish, and then slate-grey at the end, the outer ones having the terminal half white; a broad collar round the front and sides of the neck black tipped with yellowish coppery; chest pinky vinous, gradually fading into white towards the vent; bill dusky, with a reddish shade towards the base; legs and feet pinkish red; iris orange-red; eyelids lilac-red. Culmen 0·75, wing 5·8, tail 4·7, tarsus 0·85 inch. Female similar, but paler in colour. The young bird is much duller, and lacks the collar.

Hab. Africa from Egypt to the Cape, Socotra, the Canary Islands; Palestine, Greece, and Turkey.

In its general habits it is very sociable and tame, especially in Mohametan countries, where it is never molested, and is found in trees, groves, and gardens. Its nest is a mere platform of sticks or twigs, and is placed in a tree or bush, or even on the ground, and the 2 eggs are pure white, measuring about 1·19 by 0·92, and are generally deposited in March.

901. Indian Brown Turtle-Dove.

TURTUR CAMBAYENSIS.

Turtur cambayensis (Gmel.), Syst. Nat. ii. p. 779 (1788); Dresser, ix. p. 305; Rey, J. f. O. 1875, p. 291 (egg); Salvadori, Cat. B. Br. Mus. xxi. p. 451; Blanf. F. Brit. Ind. Birds, iv. p. 45.

Tortru-fachta, *Chota fakhta*, Hindu.

♂ *ad.* (India). Differs from *T. senegalensis* in having the upper parts, including the rump, pale dull earth-brown, without any reddish tinge; bill blackish; legs lake-red; iris dark brown with a whitish inner circle. Culmen 0·75, wing 5·7, tail 5·0, tarsus 0·82 inch.

Hab. Turkey, Asia Minor, Transcaspia, Central Asia, and almost the whole peninsula of India.

In habits it does not differ from *T. senegalensis*, and like that species makes a very slight nest. Its *coo*, is said to be a low subdued, musical, dissyllabic sound, repeated four or five times successively. Its eggs, which, like those of its congeners, are pure white, are deposited late in February or early in March, and vary in size from 0·95 by 0·75 to 1·02 by 0·77.

902. SURAT TURTLE-DOVE.

TURTUR SURATENSIS.

Turtur suratensis (Gmel.), Syst. Nat. i. p. 778 (1788); Salvadori, Cat. B. Br. Mus. xxi. p. 444; Blanf. F. Brit. Ind. Birds, iv. p. 43.

Chitroka fakhta, Hindu.

♂ *ad.* (India). Head and nape vinous, forehead bluish; lower hind neck black closely spotted with white; upper parts brownish spotted with warm buff, the spots fading on the lower back and rump, which latter is tinged with blue; outer edge of wing dove-blue, with long blackish terminal spots; quills and middle tail feathers brown, the other tail feathers blackish slate on the basal and bluish on the terminal half, the two outer feathers on each side white on the terminal half; chin whitish; neck, breast, and upper abdomen rosy vinous, fading to whitish on lower abdomen; under tail-coverts white; bill dull blackish plumbeous; legs dark purplish red; iris dark hazel surrounded by a reddish sclerotic; orbital skin red. Culmen 0·8, wing 5·4, tail 5·3, tarsus 0·85 inch. Female rather smaller. Young duller and lacking the black and white on the hind neck.

Hab. Afghanistan, the Himalaya up to 7,000 feet; India and Ceylon.

Frequents well-wooded districts and gardens, and has a plaintive trisyllabic note. It breeds throughout the year, in Northern India from October to May, placing its slight nest of sticks on a bush or low tree, and lays 2 pure white eggs, which measure about 1·06 by 0·82.

903. RED TURTLE-DOVE.

TURTUR TRANQUEBARICUS.

Turtur tranquebaricus (Herm.), Obs. Zool. p. 200 (1804); Salvadori, Cat. B. Br. Mus. xxi. p. 437; Blanf. F. Brit. Ind. Birds, iv. p. 47; Seebohm, B. Jap. Emp. p. 163; *T. humilis* (Temm.), Pl. Col. pl. 259 (1824); David and Oust. Ois. Chine, p. 388; Salvadori, tom. cit. p. 434; Tacz. F. O. Sib. O. p. 738; Berez. and Bianchi, Ptitz. Gan-su, p. 29.

Seroti fakhta, Biki, Hindu.

♂ *ad.* (Burma). Head and nape dove-blue, a black collar round the hind neck ; upper parts warm dark vinous red ; lower back, rump, upper tail-coverts, and middle tail-feathers slaty blue, the last brownish towards the tip ; remaining tail-feathers blackish slate on the basal, and greyish or white on the terminal half ; quills brown ; chin pinkish white ; rest of under parts warm rosy vinous, the under tail-coverts white ; bill black ; legs vinous brown ; iris dark brown ; eyelids plumbeous. Culmen 0·68, wing 5·4, tail 4·8, tarsus 0·8 inch. The female is brown above, greyish on the head, rump, flanks, and edge of wing ; breast brown tinged with vinous. The young bird is brown and lacks the black collar.

Hab. South-eastern Siberia and Japan (rare); Ala-shan; Kan-su; India, Burma and the Andamans; China, Cochin China, and the Philippines.

Is said to be more shy than its congeners, and though it frequents cultivated localities, it does not approach habitations. It is not unfrequently found in small flocks, and its note is short and deep. Like its congeners it builds a very slight nest of sticks, which is placed on a tree or bush. In India it breeds from January to July and in November, and its 2 eggs are creamy white, and measure about 1·02 by 0·8.

PTEROCLES, Temm., 1815.

904. Black-bellied Sand-Grouse.

PTEROCLES ARENARIUS.

Pterocles arenarius (Pall.), Nov. Com. Petrop. xix. p. 418, pl. viii. (1774) ; Naum. vi. p. 258, Taf. 153 ; Gould, B. of E. iv. pl. 257 ; Dresser, vii. p. 61, pl. 466 ; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 18 ; Blanf. F. Brit. Ind. Birds, iv. p. 54.

Cortiçol, Portug. ; *Ortega, Corteza,* Span. ; *Koudhre,* Arab. ; *el Koudri,* Moor. ; *Bhat-titar, Bakht,* Hindu.

♂ *ad.* (Spain). Crown, nape, and hind neck ashy pearl-grey ; back, scapulars, lesser wing-coverts variegated greyish black and orange-clay colour, the rump rather darker ; larger wing-coverts orange-yellow ; secondaries marked with orange-yellow on the outer web ; primaries slate-grey externally ; tail brownish ash tipped with white, the terminal portion indistinctly barred with dark brown ; chin and upper throat rusty red, becoming rusty orange on the sides of the neck, below this a large black mark ; lower neck and breast isabelline pearl-grey, the latter crossed by a distinct black stripe ; abdomen black ; bill dull horn-blue ;

tarsus feathered, the feet dull lead-grey; iris brown. Culmen 0·65, wing 9·2, tail 4·1, tarsus 1·3 inch. Female pale sandy ochreous, the head, neck, and upper breast spotted, the upper parts and middle tail-feathers cross-banded with black; sides of head and upper throat clay-yellow, lower throat and breast more rufous; a blackish stripe across the throat and a black band across the lower breast; abdomen black; lower tibia and tarsus ochreous; under tail-coverts dirty white.

Hab. South-western Europe; a rare straggler in other parts of Southern Europe; North Africa; Canaries; South-western Asia to Turkestan, and N.W. India in winter.

Inhabits the plains, especially in sandy desert localities; in Spain it is found in the dry marismas. It is very shy and wary, and extremely swift on the wing, and has a peculiar loud croaking cry. It feeds on seeds of various kinds, and frequents regular drinking places in the mornings and evenings. Its nest is a mere depression scratched in the soil, and its 3 eggs are usually deposited in June, and are elongated oval in shape, light stone-buff marbled with indistinct purplish grey shell-markings, and light brown surface blotches, and measure about 1·85 by 1·30 to 2·00 by 1·35.

905. Coroneted Sand-Grouse.

PTEROCLES CORONATUS.

Pterocles coronatus, Licht. Verz. Doubl. p. 65 (1823); Gould, B. of A. vi. pl. 63; Dresser, ix. p. 313, pl. 700; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 23; Blanf. F. Brit. Ind. Birds, iv. p. 57.

Quata, Arab.

♂ *ad.* (India). Middle of forehead and a small space over the eye creamy white; crown cinnamon, surrounded by a blue-grey band; a black patch on each side of the forehead, chin, and middle of the throat; upper parts sandy isabelline, the scapulars and wing-coverts marked with brown, and with a terminal spot of creamy buff; tail sandy isabelline, all but the middle feathers tipped with white, and with a subterminal black bar; primaries blackish brown; throat, cheeks, ear-coverts, and upper neck yellow; rest of under parts sandy isabelline, the lower throat and fore breast washed with grey; under tail-coverts white; beak and feet plumbeous black; iris brown. Culmen 0·7, wing 7·8, tail 4·0, tarsus 1·1 inch. The female is paler than the male, lacks the black on the head and throat, has the upper parts barred and slightly spotted, and the lower throat and breast narrowly barred with blackish brown.

Hab. Algeria, Tunis; Egypt; Arabia; Syria; Persia; Afghanistan, Baluchistan, and Sind.

Like its congeners it frequents sandy, desert localities, and is extremely swift on the wing. In its general habits it resembles *P. senegallus*, but its flight and cry, which latter is very loud, are said to differ from those of all allied species. Its eggs, 2 or 3 in number, are deposited in June or July, and are ashy white with a few pale brown markings, and measure about 1·5 by 1·06.

906. PIN-TAILED SAND-GROUSE.

PTEROCLES ALCHATA.

Pterocles alchata (Linn.), Syst. Nat. i. p. 276 (1766); Dresser, vii. p. 67, pl. 467; (Ogilvie Grant), Cat. B. Br. Mus. xxii. p. 7; (Blanf.) F. Brit. Ind. Birds, iv. p. 58; *P. pyrenaicus* (Briss.), Orn. i. p. 195; pl. xix. (1760); (Ogilvie Grant), Cat. B. Br. Mus. xxii. p. 9; *P. setarius* (Temm.) Pig. and Gall. iii. p. 256 (1815); Gould, B. of E. iv. pl. 258.

Ganga cata, French.; *Cortiçol*, Portug.; *Ganga*, Span. and Ital.; *el Guett'-ha*, Arab.

♂ *ad.* (Spain). Crown, nape, and hind neck dark brownish ash-grey washed with yellowish; back and scapulars brownish ash, broadly tipped with golden yellow; primaries bluish ash externally; secondaries dull white on inner and ashy brown margined with white on outer web, the elongated innermost dark brown; smaller outer larger, and median coverts bluish ash at base, then pale dove-blue, then chocolate-red bordered with pale sulphur, and with a narrow black apical border; inner large coverts dark ash, then golden yellow margined with black; rump and upper tail-coverts, and tail light yellowish narrowly barred with black, the elongated middle tail-feathers black on the terminal portion, the rest broadly tipped with white; sides of head warm orange, passing on the neck into olivaceous buff; chin, upper throat, and a broad line behind the eye jet black; a broad chestnut-red band bordered with black passes across the upper breast; rest of under parts white; under tail-coverts blackish grey barred with yellowish and broadly tipped with white; beak dull horn-brown, feet greyish brown; iris dark brown; bare orbital space dull lead-grey. Culmen 0·65, wing 7·3, tail 5·3, tarsus 1·15 inch. The female has the chin and centre of throat white, not black, the upper parts yellowish barred with black and ashy grey, and there are three black bands across the lower throat and breast.

Hab. Southern Europe; North Africa; Asia Minor, east to Central Asia; North-west India in the winter.

In habits this Sand-Grouse does not appreciably differ from *P. arenarius*, and like that bird is wild and shy, flies very swiftly, and feeds on seeds, and to some extent also on insects. Except during the breeding season it is found in flocks, and its call-note, *kaat, kaat, ka,* may be heard at a great distance and is generally uttered when the bird is on the wing. The nest is a mere depression in the ground, and the eggs, 2 to 3 in number, are usually deposited in May, and are elongated oval in shape, clay coloured tinged with warm rufous isabelline, with purplish grey underlying shell markings and dark reddish brown surface spots and blotches, and measure about 1·83 by 1·22.

The eastern form has been subspecifically separated from the western form (*P. pyrenaicus*) as being somewhat less brightly coloured and having the submarginal bars on the chestnut wing-coverts white and not yellowish or buff, but I do not find these characters permanent in a series and consequently do not separate the forms.

907. SENEGAL SAND-GROUSE.

PTEROCLES SENEGALLUS.

Pterocles senegallus (Linn.), Mantissa, p. 526 (1771); Gould, B. of A. pl. 62; (Ogilvie Grant), Cat. B. Br. Mus. xxii. p. 14; Dresser, ix. p. 309, pl. 699; (Blanf.), F. Brit. Ind. Birds. iv. p. 61; *P. guttatus* (Licht.), Verz. Doubl. p. 64 (1823).

Fuku, Somdi.; *Kittaviah,* Berber.; *Quata,* Arab.; *Nandu-Katingo, Gutu,* Sind.

♂ *ad.* (Sind). Crown, back, rump, lesser wing-coverts and upper tail-coverts dark isabelline, the last tinged with yellow; sides of crown to below the eye, nape, and hind neck blue-grey; primaries greyish or brownish isabelline; secondaries brown margined with isabelline; larger coverts greyish at base, then warm brown tipped with isabelline; elongated middle tail-feathers yellowish isabelline on basal, dark brown on terminal half, the rest brown at base, then blackish tipped with white sides of head and throat ochreous, the lower throat bluish grey; rest of under parts isabelline, the middle of the abdomen black; under tail-coverts creamy white, but black at the base; bill bluish grey; feet bluish white; iris brown, orbits yellowish. Culmen 0·65, wing 8·0, tail 5·75, tarsus 1·1 inch. The female has the crown, nape, and upper parts, lower throat, and breast isabelline spotted with black, the sides of the head below the eye, chin and upper throat ochreous.

Hab. Algeria, Tunis, Egypt; Arabia, Palestine, east to Persia and Afghanistan; India W. of 73° E. long. and north as far as 33° N. lat.

Frequents sandy, dry localities, and except during the breeding season keeps together in flocks of from 5 to 50, running about picking up seeds and insects on the dry soil. In the early morning and evening these fly to the drinking places often far distant, and like their congeners are very shy and wary. Their call-note is a peculiar gurgling sound like *Quiddle, quiddle, quiddle.* They nest on the ground in March or April, the 2 to 3 eggs being in ground-colour similar to those of *P. alchata* but much smaller, and the brown surface spots are very faint.

908. SINGED SAND-GROUSE.

PTEROCLES EXUSTUS.

Pterocles exustus (Temm.), Pl. Col. Nos. 354, 360 (1825); Gould, B. of Asia, vi. pl. 64; (Ogilvie Grant), Cat. B. Br. Mus. xxii. p. 12; (Blanf.), F. Brit. Ind. Birds, iv. p. 60; *P. ellioti*, Bogd. Mél. Biol. xi. p. 54 (1881).

Bhat-titar, *Kumartit*, Hindu.

♂ *ad.* (Egypt). Head, throat, and upper parts sandy buff or isabelline, the face and neck tinged with yellow, and the back with brown; scapulars and some of the median coverts tipped with reddish brown, some of the larger coverts with a subterminal white spot; quills, primary coverts, and middle tail-feathers blackish brown, the rest of the tail-feathers dark brown tipped with white or buffy white; breast warm buff crossed by a black gorget edged with buffy white; abdomen and flanks dark brown, the middle of abdomen blackish; tarsi, vent, and under tail-coverts pale buff; bill and feet slaty grey; iris dark brown; orbital skin yellowish. Culmen 0·52, wing 7·2, tail 5·3, tarsus 0·85 inch; middle tail-feathers about 2·0 longer than the lateral ones. The female is sandy buff mottled and barred with black on the upper parts; sides of head, throat, and upper breast sandy buff mottled with black on the lower throat; a narrow double black band across the breast; abdomen barred dark brown and rufous, the middle darker.

Hab. North Africa, in the west south to Senegal, in the east to the Pagani River; Palestine, Central Asia, and the chief part of the Peninsula of India.

Like its allies it frequents the open country, where it feeds on seeds and insects, and visits the drinking places in the morning and evening. Its call is a double clucking note, uttered when on the wing, and which may be heard at a considerable distance. It breeds in April in N. Africa, but in India at all seasons, the nest being a small depression in the sand, usually without any lining, but sometimes lined with a little dry grass; the eggs, 3 in number, are pale buff tinged with salmon pink, with underlying purplish grey and overlying brown surface spots, and measure about 1·45 by 1·5.

SYRRHAPTES, Illig., 1811.

909. Pallas's Sand-Grouse.

SYRRHAPTES PARADOXUS.

Syrrhaptes paradoxus (Pall.), Reise Russ. Reichs. ii. App. p. 712, Tab. F. (1773); Gould, B. of Asia, vi. pl. 60; id. B. of Gt. Brit. iv. pl. 11; Newton, P.Z.S. 1861, p. 397, pl. xxxix. fig. 1 (egg); Dresser, vii. p. 75, pl. 468; David and Oust. Ois. Chine, p. 389; Newton, Ibis, 1890, p. 207, pl. vii. (pull.); Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 2; Tacz. F. O. Sib. O. p. 740; Saunders, p. 488; Lilford, iv. p. 97, pl. 43.

Fausthuhn, German; *Sirratte*, Ital.; *Steppehöne*, Dan.; *Stepphona*, Swed.; *Hieta-kana*, Finn.; *Stepnaya-Kuritza*, Russ.; *Sha-chee*, Chinese.

♂ *ad.* (E. Siberia). Crown and sides of head dull gold colour; nape greyish buff; across the hind neck a patch of golden orange extending upwards on each side; back, scapulars and rump warm sandy ochreous, the two former boldly, the last narrowly barred with black; primaries bluish grey, the first long and attenuated, the inner ones ochreous tipped; secondaries ochreous on the inner and blackish on the outer webs; wing-coverts sandy ochreous, the larger tipped with foxy red; outer edge of wing spotted with black; tail-coverts and elongated middle tail-feathers ochreous washed with blue-grey, the latter tipped with black; rest of tail-feathers slate-grey tipped with white; under parts delicate dove-buff, tinged with grey fading to dull white on the lower abdomen, legs and feet; upper breast crossed by an irregular black bar and the middle of the abdomen by a broad black band; bill pale horn; iris dark brown. Culmen 0·5, wing 9·0, the first quill 1·1 longer than the second, tail 7·6, the middle feathers 3·6 longer than the rest, tarsus 1·1 inch. The female is duller and greyer, has the crown and nape striped with black, lacks the yellow and orange on the head and neck and the pectoral band, and has the first quill and middle tail-feathers shorter.

Hab. The steppes of Southern Russia, and Asia east to North China, north to Lake Baikal; large flocks have visited Europe at uncertain intervals, and it has been obtained in almost every country, while it has bred in Great Britain and Denmark.

In habits it resembles the other Sand-Grouse, and like them flies very swiftly. It feeds on seeds, and its call-note, which is uttered when the bird is on the wing, is a loud *truck-turuck, truck-turuck.* Its nest is a mere depression in the soil, sometimes lined with a few grass-bents, and the eggs, 3 in number, are deposited late in May or early in June, and are stone-buff, often with a greenish tint, marked with purplish brown shell-blotches and dark brown surface-spots, and measure about 1·69 by 1·16. The young bird was taken in Scotland on the 8th of August.

910. TIBETAN SAND-GROUSE.

SYRRHAPTES TIBETANUS.

Syrrhaptes tibetanus, Gould, P.Z.S. 1850, p. 92; id. B. of Asia, vi. pl. 61; Prjev. Mongol i Strana Tangut. ii. p. 14; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 5; Blanf. F. Brit. Ind. Birds, iv. p. 63.

Stepnaya-kurutza-Tibetskaya, Russ.; *Kuk*, *Kaling*, Ladak.

♂ *ad.* (Tibet). Forehead, lores, cheeks, and chin whitish slightly speckled with black; crown white irregularly barred with black; sides of head, throat, and a band round the neck deep ochreous yellow; lower neck and breast whitish, narrowly barred with black; upper parts pale fawn, finely vermiculated with black; scapulars spotted with black; quills and larger wing-coverts black; lower back, rump and upper tail-coverts with ground colour whitish; middle tail-feathers tinged with rufous, the long tips black, the rest chestnut tipped with white, and obsoletely barred; lower breast pale greyish brown fading to white on the abdomen; under tail-coverts chestnut, barred with black, and tipped with white; bill bluish; iris brown. Culmen 0·5, wing 10·15, tail 8·0, tarsus 1·1 inch. In the female the markings on the upper parts are much coarser, the whole breast is barred and the middle tail-feathers are shorter.

Hab. Tibet and the Pamir, where it is resident and found in summer at elevations above 12,000 feet, north of Sikhim; Koko-nor in Mongolia, Ládak and the upper Sutlej valley.

Frequents barren, sandy localities, and in habits resembles *S. paradoxus*; frequents sandy plains, where it feeds on seeds of various kinds, and is not shy. Its call-note, which is uttered on the wing, is a loud *caga, caga, caga.* So far as I can ascertain its eggs are unknown.

PHASIANUS, Linn., 1766.

911. PHEASANT.

PHASIANUS COLCHICUS.

Phasianus colchicus, Linn. Syst. Nat. i. p. 271 (1766); Naum. vi. p. 433, Taf. 162; Hewitson, i. p. 276, pl. lxviii.; Gould, B. of E. iii. pl. 247; id. B. of Gt. Brit. iv. pl. 12; Dresser, vii. p. 85, pl. 469; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 320; Saunders, p. 499; Lilford, iv. p. 114, pl. 51; *P. c. septentrionalis*, Lorenz, J. f. O. 1888, p. 572.

Faisan, French; *Fagiano*, Ital.; *Edelfasan*, German; *Fasan*, Swed.; *Madsharski-Petuck*, Russ.

♂ *ad.* (Asia Minor). Head and upper neck black, on the crown and nape glossed with bottle-green, and on the sides of the head, chin, and upper neck with violet-purple; lower neck, breast, and upper back feathers black at the base, then rufescent golden margined with black, some with an apical black spot; scapulars and rest of back coppery purple, most of the feathers with a central buff horseshoe mark; quills dark brown slightly barred with ochreous buff; wing-coverts golden olivaceous varied with ochreous and coppery purple; rump and upper tail-coverts fiery reddish glossed with purple; tail golden olivaceous barred with black; flanks like the breast but more golden orange in tinge; middle of abdomen bluish black; wattles on the sides of the head rich blood-red; legs dull brown; iris dark brown. Culmen 1·2, wing 9·3, tail 18·2, middle feathers 13·5 longer than the outside ones, tarsus 2·7 inch. The female has the upper parts blackish, broadly margined with clay-buff, the neck washed with vinaceous; under parts clay-buff vermiculated with blackish, the black bases showing here and there especially on the flanks and neck; quills and wing-coverts dark brown variegated with clay-buff; tail dull ochreous vermiculated with blackish, the middle feathers blacker and tinged with rufous; wattles absent.

Hab. South-eastern Europe (Greece and Turkey), Asia Minor, north to the Volga, south to the Caucasus, east to Transcaucasia; introduced and naturalised in most parts of temperate Europe.

First introduced into England by the Romans, it is believed, the Pheasant has spread throughout the United Kingdom, and is one of our most esteemed game birds; it inhabits the woodlands and groves, especially where the undergrowth is thick, and damp places, and feeds on grain of various kinds, acorns, beech-mast, and other seeds, berries, and insects, &c. The usual call is a loud *cock, cock, cock*, but the pairing note of the male is a feeble crow, and is followed by a clapping of the wings. The Pheasant is polygamous, and in the spring the males fight for the possession of the females. The nest is a depression in the soil lined with dry grass, roots, and leaves, and the eggs, usually 10 to 12 in number, are uniform pale olivaceous brown in colour, sometimes with a bluish tinge, and measure about 1·79 by 1·40.

It has been known to use a deserted owl's or squirrel's nest for the purpose of nidification, but this is uncommon, it being as a rule, a ground breeder. I have carefully compared specimens of Mr. Lorenz's *P. septentrionalis*, and cannot find any difference between it and true *P. colchicus*.

912. SUBSP. PHASIANUS TALISCHENSIS.

Phasianus talischensis, Lorenz, J. f. O. 1888, p. 571; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 324.

♂ *ad.* Differs from *P. colchicus* in having the under parts a trifle duller and redder, the blackish margins to the feathers narrower and fewer; wing-coverts as in *P. colchicus.*

Hab. Lenkoran, and the Alazan river, Transcaucasia.

In habits and nidification this species does not differ from *P. colchicus.*

913. MURGHAB PHEASANT.

PHASIANUS PRINCIPALIS.

Phasianus principalis, Sclater, P.Z.S. 1885, p. 322, pl. xxii.; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 325; Dresser, ix. p. 321, pl. 702; "*P. komarovi*, Bogd.," Zarudny, Ois. Transcasp. p. 63 (1885).

Kargooule, Tekke.

♂ *ad.* (Merv). Differs from *P. colchicus* in having the wing-coverts white, the ground colour of the upper parts golden orange, tinged with brick-red on the lower back, rump, and upper tail-coverts; tail redder, the bars narrower and further apart; under parts, more especially the breast, richly tinted with peach-carmine. Culmen 1·3, wing 9·4, tail 22·0, tarsus 2·7 inch. The female is much paler than that of *P. colchicus*, the general colour being pale clay-buff, and the dark markings are fewer.

Hab. Transcaspia and Afghanistan, the rivers Murghab, Tedgend, and Dushak, the district of Kaakuk, and along the rivers running from the mountains of Deregez and Keliat to the N. and N.E; North-eastern Persia.

In habits and nidification it does not differ from *P. colchicus*, and like that species it affects damp wooded localities, and makes its nest on the ground, depositing late in May, 8 to 12, and even, it is said, as many as 18 eggs, which closely resemble those of *P. colchicus.* A specimen in the Tring Museum, labelled *P. kancarowii*, does not differ from typical *P. principalis.*

914. SHAW'S PHEASANT.

PHASIANUS SHAWI.

Phasianus shawi, Elliot, P.Z.S. 1870, p. 403; id. Monogr. Phas. ii. pl. 1; Gould, B. of As. vii. pl. 35; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 326; *P. insignis*, Elliot, P.Z.S., 1870, p. 404; id. Monogr. Phas. ii. pl. iii.

♂ *ad.* (Yarkand). Differs from *P. principalis* in having the white of the wing-coverts slightly tinged with greyish, the upper parts rather redder and less marked with black, the rump slightly tinged with green, the tips of the flank feathers blacker and less purple in tinge, and the carmine-peach tinge on the breast is wanting. Culmen 1·25, wing 9·5, tail 16·5, tarsus 2·55 inch. Sometimes the males of this species have a trace of a white collar. The female resembles that of *P. principalis.*

Hab. The valleys of the Yarkand, Kashgar, Aksu, and Khotan rivers.

In habits this bird does not differ from *P. colchicus*, and eggs in my collection are not distinguishable from those of that species.

915. PERSIAN PHEASANT.

PHASIANUS PERSICUS.

Phasianus persicus, Severtzoff, Bull. Mosc. xlviii. pl. 3, p. 208 (1870); Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 324; Dresser, ix. p. 317, pl. 701.

Kargowal Gargaul, Persian.

♂ *ad.* (Transcaspia). Differs from *P. colchicus* in having the feathers on the breast and fore part of the back less rufous and more golden orange in colour, the rump and upper tail-coverts coppery red, the breast and sides of abdomen washed with purplish carmine, the feathers on the flanks with broader purplish black margin, those on the breast with narrower margins, the black bars on the tail much narrower, and the lesser and median wing-coverts nearly white. Culmen 1·2, wing 9·5, tail 19·8, tarsus 2·9 inch. The female is undistinguishable from that of *P. colchicus.*

Hab. The south-east Caspian, the valleys of the Soumbar, Tschandyr and Atrek rivers, Achour-Adé and the peninsula of Potemkine, north to the main portions of the Kopet-dag, Kuerendag, and Zar-i-kouh mountains.

In habits it does not differ from *P. colchicus*, and like that species is a ground breeder, depositing in May 8 to 10 eggs, olivaceous grey-green with a leather-yellow tinge, which measure about 1·67 by 1·43.

916. SUBSP. PHASIANUS ZARAFSCHANICUS.

Phasianus zarafschanicus, Tarnovski, Field, lxxvii. p. 409 (1891); Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 326; *P. tarnovskii*, Seebohm, P.Z.S. 1892, p. 271.

♂ *ad.* Is nearest allied to *P. persicus* but has the upper parts rather paler, the ground-colour of the whole including the rump and upper tail-coverts pale golden orange ; under parts rather more boldly barred than in *P. persicus* ; a somewhat faintly defined collar on the sides and back of the neck.

Hab. Zarafschan Valley.

This Pheasant frequents the damp reedy parts along the Zarafschan river and frequents the fields and gardens in search of food. Nothing appears to be known respecting its nidification, which doubtless does not differ from that of *P. persicus.*

917. SUBSP. PHASIANUS TARIMENSIS.

Phasianus tarimensis, Prjev. Dritte Reise in Centr. As. &c. p. 95 (1883) ; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 327.

♂ *ad.* Wing covers as in *P. colchicus* but rather paler and with a faint greenish grey tinge ; back with the ground-colour golden orange, the rump and upper tail-coverts tinged with greenish ; tail paler than in *P. colchicus*, under parts with the feathers but faintly margined or tipped with black. Culmen 1·5, wing 9·2, tail 16·5, tarsus 2·55 inch. The female resembles that of *P. shawi*.

Hab. Karaschar in the lower valley of the Tarim river, and the valley of the Tschertsche-Darya to the shores of the Lob-nor.

In habits and nidification this sub-species does not differ from *P. colchicus.*

918. SEVERTZOFF'S PHEASANT.

PHASIANUS CHRYSOMELAS.

Phasianus chrysomelas, Severtzoff, Bull. Mosc. xlviii. pt. 3, p. 207 (1875) ; Gould, B. of As. vii. pl. 36 ; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 327 ; *P. dorrandti* and *P. oxianus*, Severtz. J. f. O. 1875, p. 225.

♂ *ad.* (Amu-Darya). Differs from *P. shawi* in having the ground colour of the upper parts orange-red, more orange on the upper back, and redder on the lower back, rump, and upper tail-coverts, the mantle-feathers broadly margined with greenish black ; bars on the tail very narrow ; under parts more boldly marked with glossy greenish black ; ground-colour of flanks golden orange. Culmen 1·5, wing 9·3, tail 21·4, tarsus 2·75 inch. The female resembles that of *P. shawi*, but the breast is more boldly spotted with black. Like *P. shawi* the males of this species sometimes have an indication of a white collar.

Hab. The valley of the Amu-Darya.

Does not differ in habits or nidification from *P. colchicus.*

919. STRAUCH'S PHEASANT.

PHASIANUS STRAUCHI.

Phasianus strauchi, Prjev. Mongol. i Strana Tangut. ii. p. 119, pl. xvii. (1876); Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 330.

♂ *ad.* (Kan-su). Upper parts much as in *P. colchicus*, but the lower neck more orange in tinge, the lower back washed with green, the sides of the rump, upper tail-coverts, and margins of the tail-feathers bluish, with a faint greenish tinge; tail more boldly barred than in *P. colchicus*; wing-coverts blue; under parts darker and more bluish purple in tinge. Culmen 1·2, wing 9·7, tail 23·0, tarsus 2·55. The female resembles that of *P. colchicus*, but is rather darker.

Hab. The wooded portions of the Kan-su Mountains to an altitude of 10,000 feet, being most numerous in the Tetunga and Buguk-gol valleys; the mountains of Szechuen.

In habits it does not differ from its allies. It is resident and breeds in Kan-su, the breeding season being from early in April to the middle of July.

A specimen in the Rothschild collection obtained by Berezovski in Kan-su, has the upper parts rather paler and more boldly marked, the tail more purplish grey in tinge, the bars broader; breast and flanks golden orange with narrow black margins to the feathers.

Phasianus decollatus, Swinhoe (P.Z.S. 1870, p. 135), may probably be found within the limits of the Palæarctic area, but I do not find any proof that such is the case. It differs from *P. strauchi* in having the sides and flanks buff instead of orange-red, and from *P. torquatus* in having the wing-coverts blue, the rump bluer, and the white collar very indistinct or wanting.

920. SUBSP. PHASIANUS BEREZOWSKYI.

Phasianus berezowskyi, Rothschild, Bull. B. O. Club, xii. p. 20 (1901).

♂ *ad.* (Kan-su). Resembles *P. strauchi* in having the upper wing-coverts blue, but the breast is as in *P. colchicus*, though the dark margins to the golden feathers are narrower; upper parts paler and more yellow in tinge than in *P. colchicus*, the rump and upper tail-coverts blue slightly marked with black, the latter slightly varied with rufous; tail grey and golden grey at the base, washed with rufous on the outer webs, but not so rufous as in *P. strauchi*, and broadly barred with black. Culmen 1·1, wing 7·9, tail 16·9, tarsus 2·3 inch.

Hab. Kan-su.

In habits and nidification this Pheasant probably does not differ from *P. strauchi.*

921. Vlangal's Pheasant.

PHASIANUS VLANGALI.

Phasianus vlangali, Prjev. Mongol. i Strana Tangut. &c., ii. p. 116, pl. xvi; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 330.

♂ *ad.* (Tsaidam). Differs from *P. strauchi* in having the upper back, scapulars, and least wing-coverts golden orange, the rump and upper tail-coverts bluer, the under parts rather paler, the tail paler, more narrowly barred, and not margined with greenish blue. Culmen 1·45, wing 9·5, tail 19·6, tarsus 2·6 inch. The female resembles that of *P. colchicus* but is paler, and the chin and throat are pure white.

Hab. Tsaidam, west to the Tsaidam marshes, north to the Koko-nor mountains.

Frequents the cane brakes and bush-covered localities, and in winter feeds on berries. It commences nidification very early, sometimes as early as the middle of February.

922. Japanese Pheasant.

PHASIANUS VERSICOLOR.

Phasianus versicolor, Vieill. Gal. Ois. ii. p. 23, pl. 205 (1825); Gould, B. of As. vii. pl. 40; Elliot, Monogr. Phas. ii. pl. ix.; Seebohm, B. Jap. Emp. p. 370; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 334.

Kiji, Jap.

♂ *ad.* (Japan). Wing-coverts blue; crown, nape, lower neck, and entire breast deep glossy green; upper neck rich purple; scapulars orange-red, these and the dorsal feathers with black centres and margined with buff; rump greenish blue; tail greenish grey margined with purplish red, and barred with black; abdomen glossy blue; flanks dark green. Culmen 1·25, wing 9·0, tail 13·0, tarsus 2·5 inch. Female resembles that of *P. colchicus* but is much darker.

Hab. The Japanese Islands except Yezo.

Does not differ from its allies in habits. It nests on the ground, depositing, from the latter part of April to the end of July, 5 to 6 eggs, which resemble those of *P. colchicus* in colour, and measure 1·54 by 1·38. Has been introduced into Europe, and breeds freely with *P. colchicus.*

923. MONGOLIAN PHEASANT.

PHASIANUS MONGOLICUS.

Phasianus mongolicus, Brandt, Bull. Acad. St. Petersb. iii. p. 51 (1844); Gould, B. of As. vii. pl. 41; Elliot, Monogr. Phas. ii. pl. iv.; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 328; *P. brandti*, Rothsch. Bull. B. O. Club, xii. p. 20 (1901).

♂ *ad.* (Turkestan). Upper parts richly glossed with purplish carmine without any trace of golden orange; wing-coverts white with a faint greyish tinge; tail rather darker than in *P. chrysomelas*; under parts more rufous; flanks fiery red barred with greenish black, a conspicuous white collar continued round the back of the neck, but interrupted in front. Culmen 1·5, wing 9·2, tail 22·2, tarsus 2·5 inch. The female resembles that of *P. chrysomelas*, but on the dorsal feathers there is a subterminal black spot and a central bar.

Hab. The valley of the Syr-Darya east to Lake Zaisan, and the valley of the Black Irtisch, south to the valley of the Ili and Issik-Kul.

In habits and nidification it does not differ from its allies. Eggs from Issik-Kul resemble those of *P. colchicus*, but are rather paler and measure about 1·91 by 1·44.

924. SUBSP. PHASIANUS SEMITORQUATUS.

Phasianus semitorquatus, Severtz. Ibis, 1875, p. 491; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 329.

♂ *ad.* Differs from *P. mongolicus* only in having the upper parts and breast more glossed with green, and the white collar is smaller and more widely interrupted in the fore neck.

Hab. Dzungaria, north-east of Kuldja and Ebi-nor; Province of Gutchen and Urumtsi.

I do not find anything on record respecting the habits or nidification of this Pheasant.

925. RING-NECKED PHEASANT.

PHASIANUS TORQUATUS.

Phasianus torquatus, Gmel. Syst. Nat. i. p. 742 (1788); Gould, B. of As. vii. pl. 39; Elliot, Monogr. Phas. ii. pl. v.; David and Oust. Ois. Chine, p. 409; Prjev. Mongol. i Strana Tangut. p. 114; Seebohm, B. Jap. Emp. p. 369; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 331; Tacz. F. O. Sib. O. p. 785; Lilford, iv. p. 116, pl. 57.

♂ *ad.* (China). Crown and nape olive-buff, the former margined with creamy white; forehead, sides of head, and upper throat black glossed with steel-blue, a white collar encircling the neck broad in front, narrow behind; upper parts pale golden orange varied with black and buff; scapulars and least wing-coverts pale chestnut-red; rump chiefly blue; upper tail-coverts orange, somewhat varied with red; tail paler than in *P. colchicus*; breast and flanks golden orange, the former washed with purple on the sides and slightly marked with glossy blackish, the latter broadly marked with black; wing-coverts chiefly pale bluish white. Culmen 1·5, wing 9·5, tail 19·8, tarsus 2·5 inch. The female is rather smaller, and closely resembles that of *P. colchicus*.

Hab. The lower Amur and the Ussuri country; Mongolia; Manchuria; Corea; Tsusima island in the Strait of Corea; Eastern China south to Canton; has been introduced into Great Britain.

In general habits it does not differ from *P. colchicus*; it frequents bush-covered places and does not perch in the trees except when calling in the spring. It nests on the ground like its allies, and deposits in May, June, and even as late as the beginning of July, from 8 to 12, and even as many as 20 eggs, which closely resemble those of *P. colchicus*. Introduced into England early in the 18th century, and breeds freely with *P. colchicus*.

Mr. Rothschild (Bull. B. O. Club, xii. p. 21) separates the form from N.E. Mongolia, Amur, and Corea, under the name *Phasianus torquatus mongolicus* (Pall.). This form has the inner wing-coverts and scapulars much paler chestnut-red, the rump pale greenish olivaceous, and not blue, and the crown and occiput are browner in tone of colour.

926. SUBSP. PHASIANUS HAGENBECKI.

Phasianus hagenbecki, Rothschild, Bull. B. O. Club, xii. p. 20 (1901).

♂ *ad.* (Kobdo Valley, N.W. Mongolia). Is nearest allied to the Mongolian form of *Ph. torquatus*, but the crown and occiput are browner, the upper parts paler and less rufous, the rump rather bluer and boldly barred with black, the ground-colour of the tail paler; flanks paler, and with fewer and smaller purplish black markings. Culmen 1·3, wing 9·1, tail 17·2, tarsus 2·2 inch.

Hab. Mongolia.

I find no record of the habits and nidification of this Pheasant, which probably do not differ from those of *P. torquatus*.

927. SUBSP. PHASIANUS SATCHUENSIS.

Phasianus satchuensis, Prjev. Iz Zaisan cherez, Khami v. Tibet, etc., p. 95 (1883); Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 333.

♂ *ad.* Differs from *P. torquatus* in having the wing-coverts bluer, the upper parts paler, the ground-colour being dull orange-buff; rump and upper tail-coverts bluer; bars on the tail narrower; the white collar narrower and interrupted in front. Culmen 1·45, wing 9·5, tail 21·5, tarsus 2·5 inch. Female paler than that of *P. torquatus*.

Hab. Satchen, north of the Nan-Shan Mountains.

Does not differ in habits from *P. torquatus*.

928. SŒMMERRING'S PHEASANT.

PHASIANUS SŒMMERRINGI.

Phasianus sœmmerringi, Temm. Pl. Col. v. pls. 8, 9; Gould, B. of As. vii. pl. 37; Elliot, Monogr. Phas. ii. pl. xii.; Seebohm, B. Jap. Emp. p. 370; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 336.

Yamadori, Jap.

♂ *ad.* (Japan). General colour chestnut with a brownish tinge, the feathers on the upper parts glossed with purplish carmine shot with gold, the basal portions of the feathers black; quills blackish brown mottled with rufous buff; tail very long, rich chestnut, the middle feathers with narrow black bars which are above dark margined, the outer feathers broadly tipped with black; under parts vinous chestnut, paler towards the margins of the feathers. Culmen 1·10, wing 8·6, tail 36·0, tarsus 2·55 inch. The female has the crown blackish brown, the feathers margined with rufous buff, the upper parts rufous buff and cinnamon buff, marked with black; middle tail-feathers rufous mottled with black, the outer ones subterminally barred with black and tipped with white; throat and neck pale buff, the feathers tipped with black; breast and under parts paler and black at base of feathers, tail shorter, only 7·6 inch.

Hab. The islands of Hondo and Kiu-siu, Japan.

Sœmmerring's frequents both the plains and higher portions of the mountains. I do not find any special record of its habits, and, indeed, have very meagre information respecting the range of this, and the next two subspecies in the Japanese Islands.

929. SUBSP. PHASIANUS SCINTILLANS.

Phasianus scintillans, Gould, Ann. Mag. N. H. (3) xvii. p. 150 (1866) id. B. of As. vii. pl. 38; Elliot, Monogr. Phas. ii. pl. xiii.; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 337.

♂ *ad.* (Japan). Differs from *P. sœmmerringi* in being paler and not so red, the feathers on the back margined with golden yellow, those on the lower back, scapulars, wing-coverts, and rump narrowly margined with white edged with black; tail with bars of black margined with buff and buffy white; under parts vinous, varied with black and dull white. Culmen 1·15, wing 9·2, tail 34·0, tarsus 2·7 inch.

Hab. Hondo (Yokohama and Nagasaki).

In habits it does not differ from *P. sœmmerringi*; eggs from Kozugo are uniform creamy white, and measure about 1·81 by 1·36.

930. Subsp. Phasianus ijimæ.

Phasianus ijimæ, Dresser, Ibis, 1902, p. 656.

♂ *ad.* (Kiu-siu). Differs from *P. sœmmerringi* in having the lower back and rump white, only the concealed bases of the feathers being dark, the rest pure white; the dark feathers on the upper parts lack the golden yellow margins, and have narrow, purplish black edges; the under parts are as in *P. sœmmerringi*, but more rufous in tint and less marked with black. Culmen 1·4, wing 8·7, tail 29·0, tarsus 2·4 inch. The female resembles that of *P. scintillans*, but has the upper parts darker, and the middle tail-feathers uniformly coloured without transverse markings.

Hab. The island of Kiu-siu, Japan.

I have no information respecting the habits or nidification of this Pheasant.

CHRYSOLOPHUS, Gray, 1833–4.

931. Golden Pheasant.

CHRYSOLOPHUS PICTUS.

Chrysolophus pictus (Linn.), Syst. Nat. i. p. 272 (1766); Gould, B. of As. vii. pl. 19; (Elliot), Monogr. Phas. pl. xv.; (David and Oust.), Ois. Chine, p. 414; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 339; (Berezov. and Bianchi), Ptitz. Gan-su, p. 17.

Kin-ky, Chinese.

♂ *ad.* (China). Crown, long crest, lower back, and tail-coverts rich yellow; nuchal cape golden yellow margined with glossy bluish black; fore back glossy dark green margined with bluish black; outer secondaries purplish blue; scapulars rich crimson; wing-coverts chestnut mottled with black; some of the lateral tail-coverts scarlet; middle tail-feathers and elongated tail-coverts black, ocellated with warm brown, the latter with the terminal half crimson, the former tipped with pale buff, the outer tail-feathers rufous buff, barred with black;

chin, upper throat, and middle of lower abdomen warm buff; rest of under parts rich scarlet; bill greenish yellow; legs greenish horn; iris brown. Culmen 1·0, wing 7·7, tail 27·0, tarsus 2·7 inch. The female has the head and upper back brown, barred with buff and black, the lower back, rump and upper tail-coverts paler brown vermiculated with black; under parts buff, the chin and throat paler, the former all but the middle of the abdomen barred with blackish; middle tail feathers brown, irregularly barred with black, the rest more rufous, marked with buff, and barred and mottled with blackish; tail 14·0.

Hab. The mountains of Western and Southern China; Koko-nor; south-east and south-west Kan-su.

Inhabits the woods and the mountains at a moderate altitude, and is a resident throughout its range. I have never seen any eggs but those laid in confinement, which are uniform cream-colour or pale buff, and measure about 1·26 by 1·6.

932. LADY AMHERST'S PHEASANT.

CHRYSOLOPHUS AMHERSTIÆ.

Chrysolophus amherstiæ (Leadb.), Trans. Linn. Soc. xvi. p. 129, pl. 15 (1828); (Gould), B. of As. vii. pl. 20; (Elliot), Monogr. Phas. ii. pl. xiv.; (David and Oust.), Ois. Chine, p. 415, pl. 103; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 342.

Séng-ky, Chinese.

♂ *ad.* (China). Crown, sides of head, and throat blackish bronze-green; elongated occipital crest blood-red; nuchal cape white, margined and barred with black; mantle, scapulars, fore neck, and breast deep green margined with black; lower back and rump black, tipped with dull yellowish, and with a subterminal band glossed with green; upper tail-coverts white, barred with blackish and tipped with red; middle tail-feathers mottled and broadly barred with greenish black, the rest pale buff, barred with black; beak brownish horn, darker at the base; legs bluish grey; iris pale yellow, the bare skin round the eye pale greenish. Culmen 1·2, wing 8·5, tail 35·0, tarsus 3·09 inch. The female resembles that of *C. pictus*, but the naked skin round the eye is as in the male.

Hab. The high mountains of Eastern Tibet, Szechuen, and Yunnan, where it is a resident.

The present species inhabits the wooded portions of the mountains to an altitude of 7,000 to 9,000 feet, and especially the wild bamboo thickets, on the buds of which it feeds. Its eggs (laid in confinement) are rich cream-colour, in size about the same as those of *C. pictus*.

PUCRASIA, G. R. Gray, 1841.

933. MONGOLIAN PUCRAS.

PUCRASIA XANTHOSPILA.

Pucrasia xanthospila, Gray, P.Z.S. 1864, p. 259, pl. xx.; Gould, B. of As. vii. pl. 24; Elliot, Monogr. Phas. i. pl. 30; David and Oust. Ois. Chine, p. 407, pl. 104; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 315; Berez. and Bianchi, Ptitz. Gan-su, p. 19.

♂ *ad.* (Kan-su). Median occipital crest olivaceous buff, the long posterior lateral tufts with the sides of head, nape, and throat glossy black; a large white patch on each side of the neck; hind neck to back white, margined with golden buff; lower back and rump grey, striped with black; wings varied with black, buff, and rufous; elongated tail-coverts and middle tail-feathers, margined with chestnut, edged with black, the rest grey subterminally barred with black, and tipped with white; middle of throat, neck, breast and abdomen chestnut-red, the rest of the under parts greyish white, striped with black; under tail-coverts chestnut, tipped with white; bill blackish; legs dark grey; iris brown. Culmen 1·5, wing 8·9, tail 8·0, tarsus 2·5 inch. The female is buff or brown, varied with black and rufous; the crest is short, and the outer tail-feathers are as in the male, otherwise it resembles the female Himalayan *P. macrolopha.*

Hab. N.W. China; Manchuria; Eastern Tibet; Kan-su.

Inhabits the wooded portions of the mountains, where it is found singly or in pairs, and feeds on seeds of various kinds, especially those of conifers. Its habits are similar to those of its congeners, but I find no account of its nidification.

934. CHESTNUT-BELLIED PUCRAS.

PUCRASIA CASTANEA.

Pucrasia castanea, Gould, P.Z.S. 1854, p. 99; id. B. of Asia, vii. pl. 27; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 314.

♂ *ad.* (Kafiristan). Differs from *P. xanthospila* in having the lower neck, upper mantle and under parts rich chestnut-red, the rest of the upper parts paler and greyer, the elongated upper tail-coverts and middle tail-feathers brownish grey, with median black stripes, the latter also marbled with blackish; rest of tail-feathers blackish brown, narrowly tipped with buff; primaries dark brown, externally margined with buff. Culmen 1·2, wing 9·2, tail 9·5, tarsus 2·7 inch.

Hab. Northern Afghanistan and Kafiristan.

Nothing is on record respecting the habits or nidification of this species, and so far as I can ascertain only three specimens are known, the two types in the British Museum, and one in the Stuttgart Museum.

935. MEYER'S PUCRAS.

PUCRASIA MEYERI.

Pucrasia meyeri, Madarasz, Ibis, 1886, p. 145; Ogilvie Grant, Cat. B. Br. Mus. xii. p. 315.

♂ *ad.* Differs from *P. xanthospila*, in having the breast and abdomen richer chestnut, the upper tail-coverts fawn colour, striped and freckled with black, the middle and tail-feathers rufous, becoming lighter at the tips, with two irregular black lines on each side, margined with fawn colour; outer tail-feathers rich rufous on the outer webs and brownish on the inner margins, banded with black, each feather tipped with pure white. Culmen 1·10, wing 9·84, tail 9·45, tarsus 2·56. The female differs from that of *P. xanthospila* in having the middle tail-feathers rufous, irregularly patched with black, and the rest rich rufous, thinly margined on the inner sides with dusky brown, each feather banded with black and tipped with white.

Hab. Yer-ka-lo, Upper Mekong to Central Tibet.

I have not been able to examine a specimen of this Pheasant.

CROSSOPTILUM, Hodgs., 1838.

936. TIBETAN SNOW-PHEASANT.

CROSSOPTILUM TIBETANUM.

Crossoptilum tibetanum, Hodgs. J. A. Soc. Beng. vii. p. 864, pl. 46 (1838); Elliot, Monogr. Phas. i. pl. 14; David and Oust. Ois. Chine, p. 407, pl. 107; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 293; *C. drouynii*, Verreaux, N. Arch. Mus. Bull. iv. p. 85, pl. iii. (1868); Elliot, Monogr. Phas. i. pl. 15.

♂ *ad.* (Tibet). General plumage pure white; crown glossy black, the feathers short, soft, and curled; outer primaries white on the outer, brown on the inner web; rest of quills brownish grey; tail greyish at extreme base, then rich bronze and purple, naked portion of sides of head scarlet; bill reddish horn; legs red; iris orange yellow. Culmen 2·0, wing 13·4, tail 18·0, tarsus 3·75 inch. Female similar, except that she lacks the spurs.

Hab. The mountains of Western China and Eastern Tibet.

In habits this species is said not to differ from its congeners.

937. WHITE-TAILED SNOW-PHEASANT.

CROSSOPTILUM LEUCURUM.

Crossoptilum leucurum, Seebohm, Bull. Brit. Orn. Club, iv. p. xvii. (1892); Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 294.

♂ *ad.* Differs from *C. tibetanum* in having the quills pure white, the tail white from the base nearly to the end; the shafts black and tipped with rich purple. Culmen 1·75, wing 13·4, tail 18·0, tarsus 3·2. The female is similar, but has the tail-feathers tipped and margined with dark grey, the middle and outer pairs with the inner webs grey.

Hab. Eastern Tibet, between the Sok Pass, Chiamdo, and Lhassa.

I have no data respecting the habits of this species.

938. MANCHURIAN SNOW-PHEASANT.

CROSSOPTILUM MANTCHURICUM.

Crossoptilum mantchuricum, Swinhoe, P.Z.S. 1862, p. 286; Gould, B. of As. vii. pl. 22; Elliot, Monogr. Phas. i. pl. 16; David and Oust. Ois. Chine, p. 405, pl. 106; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 294.

Hoky, Chinese.

♂ *ad.* (China). Crown and neck glossy black, gradually fading into the brown of the upper and under parts; rump and upper tail-coverts white; quills brown, the secondaries slightly glossed with purple; the middle tail-feathers brownish grey tipped with purple, the rest rather darker brownish, similarly tipped; chin, upper throat, and elongate, recurved ear-tufts pure white; naked portion of face scarlet, bill light rose colour; legs coral-red; iris orange-yellow. Culmen 1·75, wing 12·9, tail 23·0, tarsus 4·0 inch. Female similar but without spurs.

Hab. The mountains of Manchuria, and Pechi-li, China.

Does not differ from its congeners in habits.

939. PALLAS'S SNOW-PHEASANT.

CROSSOPTILUM AURITUM.

Crossoptilum auritum (Pall.), Zoogr. Ross. As. ii. p. 86 (1811); Elliot, Monogr. Phas. i. pl. 17; Prjev. Mongol. i Strana Tangut. ii. p. 121, pl. xx. fig. 1 (egg); David and Oust. Ois. Chine, p. 406, pl. 108; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 295; Berezovsky and Bianchi, Ptitz. Gan-su, p. 24.

Maky-Shandgi, Chinese; *Hara-Takia,* Mongul; *Shariama,* Tangut.

♂ *ad.* (Kan-su). Crown and upper nape velvety black; chin, upper throat, and ear-tufts pure white; rest of plumage slate-grey; quills brownish; middle tail-feathers slate-grey, tipped with deep purple, the six pairs of outer ones white, tipped with purplish black; soft parts as in *C. mantchuricum*. Culmen 1·65, wing 12·2, tail 20·5, tarsus 3·5 inch. Female similar but spurless.

Hab. Mountains of North-eastern Szechuen, Eastern Koko-nor, South-western Kan-su, and Ala-shan.

Inhabits the wooded districts on the mountains up to 10,000 feet, and is a resident. In the autumn and winter they are generally in small flocks or family parties, but in the spring in pairs. Its call-note or crow is long and disagreeable, not unlike the cry of the Peacock. Nidification takes place in May, when the female deposits from 5 to 7 eggs, which in shape resemble those of the domestic fowl, but are very smooth in texture, uniform pale olive-grey in colour, and measure 2·16 by 1·62.

940. HARMAN'S SNOW-PHEASANT.

CROSSOPTILUM HARMANI.

Crossoptilum harmani, Elwes, Ibis, 1881, p. 399, pl. xiii.; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 296.

♂ *ad.* Differs from *C. auritum* in having a white band across the back of the head, and no white on the lateral tail-feathers.

Hab. Tibet, 150 miles east of Lhassa.

Nothing is known respecting the habits of this species and the only specimen known is the type, now in the British Museum, which is in an advanced state of decay.

LOPHOPHORUS, Temm., 1813.

941. MONÂL.

LOPHOPHORUS REFULGENS.

Lophophorus refulgens, Temm. Pig. and Gall. ii. p. 355 (1813); Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 278; Blanford, F. Brit. Ind. Birds iv. p. 96; *L. impeyanus*, Gould, Cent. Himal. B. pls. 60, 61 (1832 nec. Lath.); id. B. of As. vii. pl. 53; Elliot, Monogr. Phas. i. pl. 18.

Lont ♂, *Ham* ♀, Kashmir.

♂ *ad.* (Himalaya). Head, crest of spatulate feathers, bend of wing and upper tail-coverts rich metallic green; back and sides of neck copper-bronze, becoming bronze-green on the upper back; interscapulary region, scapulars, wing-coverts, and rump rich metallic purple, in parts glossed with blue-green; lower back white; quills brownish black; tail pale rufous, becoming darker towards the end ; under parts black ; the throat and under tail-coverts glossed with golden green ; bill dark horn ; legs dull ashy green ; naked orbits blue ; iris brown. Culmen 2·0, wing 12·5, tail 9·5, tarsus 3·1 inch. The female is brown, the head and neck above and on the sides, upper back, and wing-coverts black, streaked and mottled with buff ; lower back and rump buff, barred with black, the upper tail-coverts partially tipped with white ; tail broadly barred with rufous buff ; chin and throat white ; rest of under parts blackish brown, speckled and streaked with buffy white.

Hab. The Himalaya from Afghanistan to Bhutan from 8,000 to 15,000 feet in summer and in winter as low as 4,500 feet.

Inhabits the upper portions of the hill forests, and is generally seen singly or in twos or threes, the females collecting together more than the males. It feeds on insects, seeds, berries, leaves, etc., and its call is a loud plaintive whistle. Its nest is a mere depression in the ground under a bush, rock, or stone, a tuft of grass, or a tree trunk, and in May or early in June it deposits 4 to 6 eggs, which resemble those of the Turkey, being buffy white, thickly and coarsely freckled with reddish brown, and measure about 2·55 by 1·78.

942. CHINESE MONÂL.

LOPHOPHORUS LHUYSI.

Lophophorus lhuysi, Verr. Bull. Soc. d'Accl. 2nd ser. iv. p. 706 (1867) ; Sclater, P.Z.S. 1868, p. 1, pl. 1 ; Elliot, Monogr. Phas. i. pl. 19 ; Gould, B. of Asia, vii. pl. 54 ; David and Oust. Ois. Chine, p. 403, pl. 110 ; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 281 ; Berez. and Bianchi, Ptitz. Gan-su, p. 22.

Pae-mou-ky, *Ho-than-ky*, Chinese.

♂ *ad.* (Moupin). Differs from *L. refulgens* in having the upper mantle dark red-golden, the lower mantle bronze-purple, glossed with blue-green, the crest composed of ordinary feathers and purple-bronze, the tail black spotted with buff, the margins of the feathers broadly glossed with bottle-green, the rump white ; soft parts as in *L. refulgens.* Culmen 2·1, wing 13·0, tail 12·5, tarsus 3·0 inch. The female differs from that of *L. refulgens* in having the lower back white.

Hab. The more elevated portions of the mountains of Moupin, Szechuen, Eastern Koko-nor, South-west Kan-su ; probably also Yunnan and E. Tibet.

In habits it resembles *L. refulgens,* and also lives at high altitudes. It feeds on vegetable matter, especially on succulent roots. It is very shy and wild, and its cry, which is uttered in the early morning and during rain, consists of three or four shrill detached notes. At night it roosts in a tree.

ITHAGENES, Wagl., 1832.

943. Blood-Pheasant.

ITHAGENES CRUENTUS.

Ithagenes cruentus (Hardw.), Trans. Linn. Soc. xiii. p. 237 (1822); Gould, B. of As. vii. pl. 43; Elliot, Monogr. Phas. ii. pl. 30; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 268; Blanf. F. Brit. Ind. Birds, iv. p. 103; David and Oust. Ois. Chine, p. 558.

Chilimè, Nepal.; *Semo*, Bhot.; *Sumong*, Lepch.

♂ *ad.* (Sikhim). Forehead and space round the eye to ear-coverts black; crest white and grey, tinged with warm buff on the crown; upper parts slate-grey, the mantle with buffy white shaft-stripes; rest of the upper parts similar, but the stripes edged with black and the scapulars and wing-coverts washed with green; quills brown; tail brown at base, fringed with crimson, and whitish at tip; chin and upper throat crimson; rest of fore neck greenish white, margined with black; under parts to lower abdomen pale green, margined with darker green; lower abdomen like the back; under tail-coverts scarlet, tipped with white; bill black; cere, gape, orbital skin, and legs red; iris brown. Culmen 0·9, wing 8·5, tail 7·0; tarsus 2·9 inch. The female is brown, finely vermiculated with black, the head, neck, and upper throat paler and yellower, the under parts paler and more rufescent.

Hab. The higher ranges of the Himalayas in Nepal, Sikhim, and Bhutan, east to China; Tibet.

Inhabits the pine-forests at from 10,000 to 14,000 feet elevation, and is said to feed on the tender shoots of the pine and juniper, and on the berries of the latter, leaves, seeds, small fruits, &c. It has a peculiar long call, resembling the squeal of a Kite, and a shorter monosyllabic call-note. It is by no means shy, but very averse to take wing. In the autumn it is found in small flocks or family parties. Nothing appears to be known respecting its nidification.

944. Chinese Blood-Pheasant.

ITHAGENES SINENSIS.

Ithagenes sinensis, David, Ann. Sc. Nat. 5th ser. xviii. art. 5, p. 1 (1874); David and Oust. Ois. Chine, p. 402, pl. 114; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 270; Berez. and Bianchi, Ptitz. Gan-su, p. 15; *I. geoffroyi*, Prjev. Mongol. i Strana Tangut. ii. p. 122 (1876, nec. Verr.).

Hoa-ky, *Song-hoa-ky*, Chinese; *Sermun*, Mongol.

♂ *ad.* (Kan-su). Differs from *I. geoffroyi* in having the crest, throat, and neck much paler and greyer, the sides of the crest brownish black, the inner secondaries and wing-coverts washed with golden buff, not green, and the tail rather darker and greyer. Culmen 0·9, wing 8·5, tail 6·0, tarsus 2·5 inch. The female resembles that of *I. cruentus*, but has the upper parts paler, the chin and throat whitish grey, and the under parts pale brownish buff, but slightly vermiculated on the breast.

Hab. South-west Kan-su; the Nan-shan Mountains and the Sinling Mountains between Shansi and Honan.

In habits this Pheasant does not differ from its allies, and also inhabits the woods and bamboo-thickets at considerable elevations in the mountains.

945. GREY-NECKED BLOOD-PHEASANT.

ITHAGENES GEOFFROYI.

Ithagenes geoffroyi, Verr. Bull. Soc. d'Acclim. (2nd ser.), iv. p. 706 (1867); Gould, B. of As. vii. pl. 42; Elliot, Monogr. Phas. ii. pl. 31; David and Oust. Ois. Chine, p. 401, pl. 113; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 269.

Tsong-ky, Chinese.

♂ *ad.* (Moupin). Differs from *I. cruentus* in having the crown, crest, and throat slate-grey, much more green on the wings, the sides and flanks green, the breast and middle of abdomen slate-grey, and the tail much paler. Culmen 0·9, wing 9·2, tail 7·0, tarsus 1·5 inch. The female is greyer above than that of *I. cruentus*, has the head, chin, and throat brownish, the tail more mottled and slightly margined with crimson.

Hab. Eastern Tibet, Eastern Szechuen, and the Mantzes country.

Inhabits the more elevated mountain forests, and is said to perch on the trees, and to feed on seeds, buds, and moss. Its note is a prolonged, clear, but not loud, whistle. Nothing appears to be on record respecting its nidification, but eggs in the British Museum said to belong to this species are elongate oval in shape, smooth in texture of shell, blotched with dark reddish brown on a pale reddish buff ground, and measure from 1·85 to 2·05 in length, and from 1·25 to 1·3 in breadth.

CACCABIS, Kaup, 1829.

CACCABIS SAXATILIS.

946. GREEK PARTRIDGE.

Caccabis saxatilis (Wolf and Meyer), Naturg. Vög. Deutschl. p. 87, pl. 48 (1805); (Naum.), vi. p. 546, Taf. 164; (Gould), B. of E. iv. pl. 261, fig. 2; Dresser, vii. p. 93, pl. 470, fig. 1; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 111; *C. græca* (Steph.), in Shaw's Gen. Zool. xi. p. 346 (1819).

Bartavelle, French; *Cortornice*, Ital.; *Steinhuhn*, German.

♂ *ad.* (Switzerland). Forehead, feathers round the base of the bill, lores, and a stripe passing through the eye down the sides of the neck, where it broadens and joins in front, black; crown and upper parts including the scapulars and inner secondaries dove-blue, the nape tinged with vinous buff, the back washed with warm vinous, and the scapulars and inner secondaries with buffy brown; quills dark brown, externally ochreous; middle tail-feathers dove-blue, the rest dove-blue at the base, otherwise fox-red; chin and throat white; breast-feathers dove-blue edged with pale buff; abdomen and under tail-coverts warm ochreous; flank-feathers dove-blue crossed by a black, then a white, and then a black, band, and slightly tipped with chestnut-red; bill, legs, and edge of eyelid coral-red; iris dark brown. Culmen 0·85, wing 6·4, tail 3·9, tarsus 1·7 inch. Sexes alike.

Hab. The mountains of Southern Europe, the Eastern Pyrenees, the Alps, Apennines, Carpathians, and Balkans; Sicily.

Inhabits stony, mountainous regions, only descending when driven down by stress of weather. As a rule it is tame and unsuspicious, but very quarrelsome during the breeding season. Its note resembles the syllables *kakabi, kakabet* uttered several times in succession, and also *cok, cok, cokroo* also several times uttered. It feeds on grain, seeds, tender shoots, and insects. It nests on the ground amongst the rocks, the nest being merely a depression lined with a few leaves and grass-bents. The eggs, which are deposited late in May or in June, vary in number from 8 to 18 or even sometimes more, and are very finely marked with reddish yellow on a pale yellowish ground; in size they measure about 1·59 by 1·19.

947. Chukar Partridge.

CACCABIS CHUCAR.

Caccabis chucar (Gray), Ill. Ind. Zool. i. p. 54 (1830–32); (Gould), Cent. B. Himal. pl. 71 (1832); Dresser, vii. p. 97, pl. 470, fig. 2; David and Oust. Ois. Chine, p. 395; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 113; Blanf. F. Brit. Ind. Birds, iv. p. 131; *C. pallescens, arenarius* and *pallidus,* Hume, Lah. to Yark. pp. 283, 284 (1873).

Kurotschka, Russ.; *Kabk,* Persian; *Chukar,* Hindu.

♂ *ad.* (Rhodes). Differs from *C. saxatilis* in having the upper parts paler, more rufous and less grey in tinge, the auriculars marked with rufous, the chin and throat yellowish buff and not white, and the lores buffy white and not black. Culmen 1·0, wing 6·4, tail 3·8, tarsus 1·85 inch.

Hab. South-eastern Europe; the Ionian Islands; Palestine; Asia Minor and Central Asia, east to Turkestan, Mongolia, Tibet, and China, south to the Punjab in India.

Frequents similar localities to *C. saxatilis,* which it closely resembles in habits, but in India it is found on open hillsides, amongst bushes and grass, and in cultivated fields. It breeds from April to August, its eggs being somewhat similar to those of *C. saxatilis,* but the spots are more rufous and as a rule somewhat larger. In size they vary from 1·50 by 1·17 to 1·62 by 1·22.

948. Mongolian Partridge.

CACCABIS MAGNA.

Caccabis magna, Prjevalsky, Mongol. i Strana Tangut. etc. ii p. 127 (1876); Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 120.

♂ *ad.* Differs from *C. saxatilis* in being considerably paler, the general colour being pale sandy isabelline, the black collar rather narrow with an outside margin of rusty red. Culmen 1·0, wing 7·4, tail 4·8, tarsus 1·65 inch.

Hab. The Southern Koko-nor mountains, the Tsaidam plains, and Northern Tibet.

In habits it does not differ from *C. chucar,* but is said to be more silent. When taking wing it utters a peculiar hollow note, something like *cuta-cuta,* different from the call of *C. chucar.* Nothing appears to be on record respecting its nidification.

949. Red-legged Partridge.

CACCABIS RUFA.

Caccabis rufa (Linn.), Syst. Nat. i. p. 276 (1766); (Hewitson), i. p. 282, pl. lxxi. fig. 2; Dresser, vii. p. 103, pl. 471, fig. 1; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 118; Saunders, p. 503; Lilford, iv. p. 120, pl. 53; *C. rubra* (Temm.), Pig. and Gall. iii. p. 361 (1815); (Naum.), vi. p. 563, Taf. 165, figs. 1, 2; (Gould), B. of E. iv. pl. 260; id. B. of Gt. Brit. iv. pl. 14.

Perdrix rouge, French; *Perdiz*, Portug. and Span.; *Pernice*, Ital.; *Rothfeldhuhn*, German.

♂ *ad.* (England). Differs from *C. saxatilis* in having only the forehead and fore crown ash-grey, the hind crown, nape, hind neck, and upper parts being reddish brown, the wing-coverts, lower back and scapulars tinged with grey; below the black band, which encloses the white throat, the lower neck is greyish white, spotted and splashed with black; the four middle tail-feathers like the back, the rest deep fox-red. Culmen 0·75, wing 6·0, tail 3·65, tarsus 1·7 inch. Sexes alike.

Hab. Western and Southern Europe; Britain (introduced); Madeira, Azores, and Canaries; Elba, Corsica, and the Balearic Islands.

Much more shy and restless than the common Partridge, it frequents heavy soil and wild heaths, and as it runs before the dogs was by no means a favourite with old-fashioned sportsmen. It also sometimes perches on trees, and its cry is *chuck, chuck, chuck, ker, kerr.* Its nest is placed on the ground, and its eggs, which are usually deposited in May, are yellowish buff or stone buff, faintly spotted with rufous, or pale purplish pink, and measure about 1·63 by 1·22.

950. Barbary Partridge.

CACCABIS PETROSA.

Caccabis petrosa (Gmel.), Syst. Nat. i. p. 758 (1788); (Gould), iv. pl. 261, fig. 1; Dresser, vii. p. 111, pl. 471, fig. 2; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 120.

Pernice di Sardegna, Ital.; *El Hedjel*, Moor.

♂ *ad.* (Sardinia). Differs from *C. rufa* in having the crown, nape, and hind neck rich chestnut-red, the sides of the head above and below the eye and the throat bluish ash; the collar, which is broad on the sides and narrow in the middle, rich chestnut-red spotted with white ; throat below the collar bluish ash ; outer scapulars and some of the wing-coverts deep bluish ash broadly margined with chestnut ; soft parts as in *C. rufa*. Culmen 0·9, wing 6·1, tail 3·75, tarsus 1·85 inch.

In habits it does not differ from *C. rufa*, and its eggs, 10 to 15 in number, are deposited in April and resemble those of *C. rufa*, but are as a rule more richly marked with rufous.

AMMOPERDIX, Gould, 1851.

951. Seesee Partridge.

AMMOPERDIX BONHAMI.

Ammoperdix bonhami (Fraser), P.Z.S. 1843, p. 70 ; Gould, B. of A. vii. pl. 1 ; Dresser, vii. p. 117, pl. 472 ; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 123 ; Blanf. F. Brit. Ind. Birds, iv. p. 133 ; *A. griseogularis* (Brandt), Bull. Acad. St. Petersb. 1843, p. 278.

Sisi, Hindu.

♂ *ad.* Crown ashy blue-grey, tinged with vinous behind ; forehead and a line passing over and behind the eye black ; lores and ear-coverts silky white, the latter rufous posteriorly ; upper parts pale isabelline grey, indistinctly barred and freckled with darker grey and creamy brown ; primaries dark brown, the outer web barred with buffy white ; middle tail-feathers like the back, the rest chestnut-red, becoming greyish towards the tip ; chin, sides of head, and throat blue-grey ; sides of neck ashy grey spotted with white ; breast pale vinous ; flank-feathers vinous grey margined with black and rich rufous, forming stripes ; abdomen greyish white tinged with pale rufous ; under tail-coverts pale rufous ; bill orange ; legs wax-yellow ; iris orange-brown. Culmen 0·62, wing 5·15, tail 2·5, tarsus 1·25 inch. The female lacks the blue-grey, white and black on the head, is generally browner and more variegated with rufous buff ; breast and flanks rufous buff narrowly barred with dark grey ; abdomen and under tail-coverts buffy white.

Hab. The Euphrates valley, south to Aden ; Transcaspia, Persia, Afghanistan, Turkestan, Baluchistan, and all the ranges of the Punjab and Sind, west of the Indus ; is said by Gould to occur in Tibet.

Affects bare stony and rocky localities in the hills, and is never found in the woods or amongst bushes. Generally it is found in pairs and only occasionally in winter in small coveys. Its flight resembles that of the Quail, and when it rises it utters a whistling note, but the ordinary note is a double one repeated several times. It breeds from April to June, making a slight nest on the ground often under a bush or between stones. The eggs, 8 to 12, are creamy white, and measure about 1·40 by 1·0

FRANCOLINUS, Steph., 1819.

952. FRANCOLIN.

FRANCOLINUS VULGARIS.

Francolinus vulgaris, Steph. in Shaw's Gen. Zool. xi. p. 319 (1819); Gould, B. of E. iv. pl. 259; Dresser, vii. p. 123, pl. 473; Blanf. F. Brit. Ind. Birds, iv. p. 135; *Tetrao francolinus*, Linn. Syst. Nat. i. p. 275 (1766); (Ogilvie Grant), Cat. B. Br. Mus. xxii. p. 132.

Francolino, Ital.; *Turatz*, Turkish; *Durraj*, Persian; *Kulatitar*, Hindu.

♂ *ad.* (Asia Minor). Crown and nape-feathers brown with blackish centres; sides of hind crown and lower nape marked with white; sides of head black with a long white patch below and behind the eye; a broad chestnut-red collar round the neck; chin, throat, neck, and breast otherwise deep black, spotted with white on the hind neck; upper parts blackish brown varied with bright ochreous and whitish ochreous; rump, upper tail-coverts, and tail black barred with white; quills blackish brown barred with reddish ochre; flanks black spotted with white; abdomen rufous varied with white; under tail-coverts chestnut tipped with white; bill black; legs reddish orange; iris brown. Culmen 1·0, wing 6·9, tail 4·1, tarsus 2·2 inch. The female is much paler and duller, the chestnut collar is restricted to a patch on the hind neck, the rump and upper tail-coverts brown barred with brownish buff; sides of head buffy white; chin and upper throat white; rest of under parts buffy white barred and blotched with blackish brown; under tail-coverts chestnut marked with pale brown and black.

Hab. Cyprus, Palestine, Asia Minor, Armenia, Persia, India east and south to Manipur; now extinct in Sicily.

Frequents grassy places and scrub near cultivation, and also cultivated ground, and feeds on grain, seeds, and insects. The note of the male is five syllabled, harsh, and not unlike the crow of a Pheasant. It breeds, in India, from May to August, usually in June, and deposits 6 to 10 eggs, making a loosely constructed nest of straw, grass, roots, or leaves, placed on the ground. The eggs are of a uniform warm drab, buffy brown, or stone-colour, and measure 1·56 by 1·28.

953. SENEGAL FRANCOLIN.

FRANCOLINUS BICALCARATUS.

Francolinus bicalcaratus, Linn. Syst. Nat. i. p. 277 (1766); Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 160; Dresser, ix. p. 325, pl. 703; *Perdix senegalensis*, Bonn. Tabl. Encycl. and Méth. i. p. 212, pl. 93, fig. 2 (1791).

Hadjel el Sahâra; Rarâgh, Arab.

♂ *ad.* (Morocco). Fore crown and a stripe on each side black; rest of crown reddish brown; superciliary stripe, space in front of the eye and sides of the head white, the last striped with blackish; hind neck and fore back varied black and rufous and margined with creamy white; upper parts brown, vermiculated with black, the scapulars and wing-coverts with a submarginal creamy white stripe; quills and tail dark brown, the former barred, the latter clouded and irregularly barred with warm and rufous buff; chin and upper throat white; breast and under parts buff, with a drop-shaped black median spot, barred with buff, and basally bordered with chestnut, the last wanting on the lower flanks and under tail-coverts; bill greenish at the base, otherwise yellow; legs dull greenish yellow; iris brown. Culmen 1·15, wing 7·3, tail 3·25, tarsus 2·6; the male has two pairs of spurs on the legs. Sexes otherwise alike.

Hab. West Africa from the Niger to the Mogador coast; Casa Blanca and as far north in Morocco as Rabât.

But little is on record respecting the habits of this Francolin, which is said to frequent grass lands, and, except during the breeding season, goes in coveys of 5 to 12 individuals. I find no record of its nidification, but possess two eggs laid in an aviary, which are dull in texture, uniform creamy buff in colour, and measure 1·86 by 1·40 and 1·92 by 1·43.

PERDIX, Briss., 1760.

954. THE PARTRIDGE.

PERDIX CINEREA.

Perdix cinerea, Lath. Ind. Orn. ii. p. 645 (1790); Naum. vi. p. 478, Taf. 163; Hewitson, i. p. 281, pl. lxxi. fig. 1; Gould, B. of E. iv. pl. 262; id. B. of Gt. Brit. iv. pl. 13; Dresser, vii. p. 131, pls. 474, 475; Saunders, p. 501; Lilford, iv. p. 118, pl. 52; *P. damascena*, Briss. Orn. i. p. 223 (1760); Ogilvie Grant, op. cit. p. 192; *Tetrao perdix*, Linn. Syst. Nat. i. p. 276 (1766); (Ogilvie Grant), op. cit. p. 185.

Perdrix grise, French; *Starna,* Ital.; *Rebhuhn,* German; *Patrijs,* Dutch; *Agerhöna,* Dan.; *Raphöna,* Norweg.; *Rapphöra* Swed.; *Turkinpyy, Peltopyy,* Finn.; *Kouropatka,* Russ.

♂ *ad.* (England). Crown, nape, and ear-coverts warm brown; forehead, a broad stripe over the eye, sides of the head, chin, and upper throat orange chestnut; hind neck and upper parts brownish grey, vermiculated with reddish brown and dark brown, the wing-coverts marked with chestnut, and with a central ochreous shaft stripe; rump and upper tail-coverts banded with chestnut; tail chestnut-red, the middle feathers buffy and vermiculated with brown towards the tip; lower throat and breast pale blue-grey, vermiculated with dark grey; on the lower breast a dark chestnut horseshoe patch; flanks barred with chestnut; lower abdomen and thighs greyish white; under tail-coverts yellowish buff, vermiculated with dark greyish; legs and feet bluish grey, with a brown tinge; bill bluish white; iris hazel-brown. Culmen 0·75, wing 6·1, tail 3·95, tarsus 1·75 inch. The female is rather smaller, has the upper parts darker and browner, the light chestnut on the throat covers a smaller area, the horseshoe pectoral band is either wanting or much smaller, and the wing-coverts have buff cross-bars.

Hab. Temperate Europe generally, north to central Scandinavia and Great Britain, south to the Mediterranean; Asia east to the Altai and Northern Persia.

Frequents open, cultivated ground or heaths and commons, not woodlands, and except during the breeding season is found in coveys. Its flight is strong, with a loud whirring sound, and it is essentially a ground bird, never perching on a tree, and its call-note is *kertchup, kertchup.* It nests also on the ground, lining a depression in the ground with a few dry straws or grass-bents, and in May deposits 12 to 16 sometimes even more eggs, which are uniform pale olivaceous brown, and measure about 1·43 by 1·07.

955. Daurian Partridge.

PERDIX DAURICA.

Perdix daurica (Pall.), Zoogr. Ross. As. ii. p. 78 (1811); David, N. Arch. Mus. Bull. iii. p. 38; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 192; *P. barbata,* Verr. and Desm. P.Z.S. 1863, p. 62, pl. ix.; Gould, B. of As. vi. pl. 73; Tacz. F. O. Sib. O. p. 776.

Kouropatka-boradataya, Kamenoi-Riabtschik, Russ.

♂ *ad.* (Dauria). Differs from *P. cinerea* in having the chin, throat, sides of the head and the breast warm golden ochreous, the feathers on the side of the throat elongated, and the pectoral horseshoe-shaped patch deep black. Culmen 1·0, wing 6·0, tail 3·4, tarsus 1·45 inch.

Hab. Central and Eastern Asia; north and east to Dauria and the southern Baikal, west to the Altai; Yenesei and Russian Dzungaria; Eastern Turkestan; Mongolia, Manchuria, Tibet, and Northern China.

In habits it does not differ from *P. cinerea*, and its nest and eggs are similar, but the latter, which are usually deposited early in June, are somewhat smaller, measuring about 1·35 by 1·03.

956. TIBETAN PARTRIDGE.

PERDIX HODGSONIÆ.

Perdix hodgsoniæ, Hodgson, J. A. S. Beng. xxv. p. 165, and pl. (1857); Gould, B. of As. vi. pl. 74; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 193; Blanf. F. Brit. Ind. Birds, iv. p. 142.

Sakpha, Tibetan.

♂ *ad.* (Ladak). Forehead buffy white, edged with black before and behind; crown deep chestnut, washed with white; lores, supercilium, and cheeks buffy white; sides of and lower hind neck foxy red with grey margins to the feathers, forming a collar; upper parts, wings and tail as in *P. cinerea*; chin and upper throat white, with a buff tinge; sides of head below the eye, and nearly meeting the front, black, below which is a white band; under parts whitish, barred down to the lower abdomen with black, and a black patch on the middle of the body; flanks washed with rufous; bill and legs horn-green; orbital skin reddish. Culmen 0·9, wing 6·4, tail 3·4, tarsus 1·6 inch. Sexes alike.

Hab. Tibet north of Sikhim and Nepal and as far west as Hanle, at 14,000 to 18,000 feet elevation; Kashmir.

In habits it is said to resemble *P. cinerea*, and the eggs are pale drab, with a faint reddish brown tinge over the large end, and at the point of the smaller end, and measure 1·77 by 1·2.

957. KANSU PARTRIDGE.

PERDIX SIFANICA.

Perdix sifanica, Prjevalsky, Mongol. i Strana Tangut. &c., ii. p. 124 (1876); Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 195; Berez. and Bianchi, Ptitz. Gan-su, &c. p. 13.

♂ *ad.* (Kan-su). Differs from *P. hodgsoniæ* in lacking the black patch on the under surface of the body, and those on the sides of the head are reduced to a smallish patch below the eye. Culmen 0·9, wing 5·55, tail 3·0, tarsus 1·6 inch.

Hab. The alpine regions of south-west Kan-su, the Amdos plateau, the Nan-shan and Si-ning Mountains and Northern Tibet.

In habits it is said to resemble *P. daurica,* but its call-note is harsher, and when taking wing it utters a more squeaking and louder note than that bird. It is not found lower than about 10,000 feet above the sea level. It breeds in May, the number of eggs being about 15, these being similar to those of *P. hodgsoniæ.*

COTURNIX, Bonn., 1790.

958. The Quail.

COTURNIX COMMUNIS.

Coturnix communis, Bonnaterre, Tabl. Encycl. Méth. i. p. 217 (1790); Gould, B. of Gt. Brit. iv. pl. 15; Dresser, vii. p. 143, pl. 476; Blanf. F. Brit. Ind. Birds, iv. p. 114; Saunders, p. 505; Lilford, iv. p. 121, pl. 54; *Tetrao coturnix*, Linn. Syst. Nat. i. p. 278; (Naum.), vi. p. 576, Taf. 166; (Ogilvie Grant), Cat. B. Br. Mus. xxii. p. 231; *C. vulgaris*, Bout. Orn. Dauph. p. 72, pl. 43, fig. i. (1843); Hewitson, i. p. 284, pl. lxxii.

Caille, French; *Codorniz*, Portug. and Span.; *Quaglia*, Ital.; *Wachtel*, German; *Kwartel*, Dutch; *Vagtel*, Dan. and Norweg; *Vaktel*, Swed.; *Peltopyy*, Finn.; *Perepelka*, Russ.; *Bildertschin*, Persian; *Bater*, Hindu.

♂ *ad.* (England). Crown and nape blackish brown, variegated with rufous buff, and with a central and two lateral buff lines; upper parts warm light brown, broadly marked with dark brown and black, and with long dashes of light buff; wings and tail brown, barred with buff; sides of head pale brown; throat and sides of neck buffy white; a black patch on the chin, a black band at the base of the throat, and a rufous band below; sides of neck washed with rufous; breast pale rufous dashed with white; rest of under parts buffy white, the flanks rufous with buff central stripes; bill brownish horn; legs fleshy brown; iris brown. Culmen 0·5, wing 4·15, tail 1·6, tarsus 1·1 inch. The female has the chin and throat buffy white, unmarked with black, and the breast reddish buff, spotted with blackish brown.

Hab. Europe generally, breeding north to Scandinavia and Britain, and south to North Africa, migrating into South Africa in winter; Asia Minor and Asia, north to Siberia and south to India in winter; not occurring in South-eastern Asia; in South Africa and the islands off the African coast it is replaced by a closely allied form, *C. capensis*, Licht., which, in the male, has the throat bright rufous chestnut with a black anchor-shaped mark down the middle.

Is chiefly migratory throughout its range, and is a less gregarious bird than the Partridge, but when migrating they collect in vast flocks. Its flight is swift, whirring and direct, and its food consists of seeds, grain, and insects. Its note is a short harsh and deep prelude *rowow*, followed by a loud *pickernic* or *wet-my-lips*, or *wet-my-feet*, and both sexes call each other with a note resembling the syllables *beebewe*. It is monogamous, and breeds late, the eggs being deposited late in June or early in July, in a depression in the ground scantily lined with a few grass bents or plant stems. The eggs, 8 to 14 in number, are brownish yellow, richly blotched with blackish brown, and measure about 1·18 by 0·92.

959a. Subsp. Coturnix japonica.

Coturnix japonica, Temm. and Schlegel, Faun. Jap. Aves, p. 103, pl. 61 (1842); Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 239; *C. ussuriensis*, Bogd. Consp. Av. Imp. Ross. i. p. 45 (1884); Tacz. F. O. Sib. O. p. 780.

Udzura, Jap.

♂ *ad.* (Japan). Differs from *C. communis* in having the lores, sides of the head, chin, and throat uniform dull brick red, without any black mark in the middle, and the flank feathers with rufous margins, and less spotted with black. Culmen 0·5, wing 3·8, tail 1·15, tarsus 1·0 inch. The female differs from that of *C. communis* in having the chin and throat feathers elongate and lanceolate, those on the sides of the throat margined with rufous on the outer web.

Hab. Japan, Corea, China, Manchuria, Mongolia, Ordos, Kan-su, and Koko-nor, north to the Ussuri country and Dauria.

In habits it does not differ from *C. communis*, and its eggs are similar to those of that species.

TETRAOPHASIS, Elliot, 1871.

960. Moupin Pheasant.

TETRAOPHASIS OBSCURUS.

Tetraophasis obscurus (Verr.), N. Arch. Mus. Bull. v. p. 33, pl. vi. (1869); Elliot, Mon. Phas. pl. xxi.; Gould, B. of As. vii. pl. 44; Prjev. Mongol. i Strana Tangut. &c, ii. p. 429, pl. xx. fig. 2 (egg); Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 102.

Cundeck, Tangut.

♂ *ad.* (Kan-su). Crown and sides of head dark grey, the former with dark shaft-stripes; neck and upper parts wood-brown with a few dark spots, the wing-coverts and secondaries with broad grey-white terminal margins; lower back, rump, and tail-coverts greyish brown, the last with pale tips; quills brown; middle tail-feathers greyish brown, vermiculated with dark brown, the rest blackish brown broadly tipped with white; chin and front of throat rich chestnut; breast pale slate-grey with blackish spots; rest of under parts brownish grey broadly tipped with pale isabelline; under tail-coverts warm chestnut, tipped with white; tarsi spurred. Culmen 1·45, wing 8·5, tail 6·3, tarsus 2·1 inch. Female similar but without spurs.

Hab. Eastern Tibet, Koko-nor, Kan-su, east to Szechuen.

Inhabits the central mountain ranges where these are wooded, and bush-covered rocks and ravines. Its note resembles that of *Crossoptilum auritum* but is more varied and prolonged. In the pairing season and also when surprised, it erects the tail spreading it out fan-like, and droops the wings. The pairing season commences in March, and the nest is said to be placed on the ground under thick bushes, and constructed of grass, and the eggs, which are deposited late in April, are yellowish grey or dirty grey spotted with brown, the spots being most numerous at the smaller end, and measure about 1·9 by 1·48 to 2·3 by 1·53.

961. TIBETAN PHEASANT.

TETRAOPHASIS SZECHENII.

Tetraophasis szechenyii, Madarasz, Zeitsch. Ges. Orn. ii. p. 50 pl. ii. (1885); Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 103; *T. desgodinsi*, Oustal. Le Nat. 1886, p. 276.

♂ *ad.* (Tibet). Differs from *T. obscurus* in having the chin, throat, and fore neck pale fawn instead of chestnut, the upper parts much greyer, and the middle of the breast and abdomen marked with rufous buff and chestnut like the flanks. Culmen 1·42, wing 8·7, tail 6·7, tarsus 1·9 inch.

Hab. The mountains of Central Tibet, north to the Sok Pass, south to Yer-ka-lo, Mekong River, and east to Fa-tsien-loû.

Respecting the habits and nidification of this species I find nothing on record.

TETRAOGALLUS, Gray, 1833.

962. CAUCASIAN SNOW-PARTRIDGE.

TETRAOGALLUS CAUCASICUS.

Tetraogallus caucasicus (Pall.), Zoogr. Ross. As. ii. p. 76, and pl. (1811); Dresser, vii. p. 237, pls. 491, 492; (Radde), Orn. Caucas. p. 335, pl. xxi. figs. 1, 2 (eggs); Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 109.

Gornaya-Indeika-Chourtka, Russ.

♂ *ad.* (Caucasus). Crown, nape, and hind neck ashy grey; a broad ashy grey patch, covering a large portion of each side of the head, passes down the side of the neck; throat, and rest of the neck white; upper parts greyish black, finely vermiculated with buff, the lower neck and fore back unspotted, the rest of the upper parts with buff and fox-red spots; primaries white, broadly terminated with blackish; secondaries white at the base, then like the back; middle tail-feathers black, vermiculated with buffy white, the rest black tipped with chestnut, vermiculated at the base with buff, and at the tip with blackish; lower throat and breast-feathers buffy white margined with black; rest of under parts blackish ash-grey closely vermiculated with buffy white; flank-feathers tinged with slate, margined on each side with fox-red, and externally edged with black; under tail-coverts white; bill dull yellowish, becoming horn-brown towards the tip; legs orange-yellow; iris brown; bare skin round the eye yellow. Culmen 1·2, wing 10·5, tail 7·0, tarsus 2·25 inch. The female is duller and paler, the crown and hind neck are tinged with reddish brown, the stripe down the neck is reddish brown, and the barrings on the lower throat and breast are narrower and ill-defined.

Hab. The mountains of the Caucasus.

According to Dr. Radde this bird inhabits only the Great Caucasus, where it is found close to the snow line in rocky, almost inaccessible places, on the sides of the mountains where the sun has melted the snow, above the tree growth. In its habits it is said to be a true Partridge, and it feeds on tender buds and shoots of various Alpine plants, and lays up a store in some sheltered place for the winter. Its nest is a mere depression, or is a scanty bed of plant-stems, on the shelf of a rock in some sheltered position, and the eggs, 12 to 15 in number, are deposited late in April, and are dull light clay-buff in colour with an oil-green tinge, somewhat sparingly spotted with dull rufous, and measure about 2·65 by 1·78.

963. Caspian Snow-Partridge.

TETRAOGALLUS CASPIUS.

Tetraogallus caspius (S. G. Gmel.), Reise Russl. iv. p. 67, pl. x. (1784); Gould, B. of As. vii. pl. 29; Radde, Orn. Cauc. p. 343, pl. xxii.; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 108; Dresser, vii. p. 241; pl. 493.

Ur-Keklik, in the Taurus; *Kabk-i-dareh*, Persian.

♂ *ad.* (Taurus). Differs from *T. caucasicus* in having the head, neck, and upper parts paler and tinged with buff, the larger wing-coverts bluer and less vermiculated on the basal portion; sides of head and neck creamy white, the space below the eye pale blue-grey with a darker blue-grey stripe down the side of the neck; feathers of lower throat and upper breast tipped with ashy buff, becoming ashy buff on the sides, and on the forepart boldly spotted with black; rest of breast ashy buff, vermiculated with blackish grey; middle of abdomen sooty slate; crissum dull buff; under tail-coverts creamy white; bill yellowish horn, paler at the base; legs rich orange-red; iris dark brown; bare space round and below the eye brilliant Indian yellow; nostrils orange-red. Culmen 1·7, wing 11·8, tail 8·0, tarsus 2·6 inch. The female is rather smaller and duller, has the crown slightly marked with light buff and dark grey, the stripes on the sides of the neck and the band on the lower throat buffer in tinge, the latter vermiculated with grey, and both mottled with black, soft parts duller than in the male, and the spur on the hind tarsus wanting.

Hab. The Taurus Mountains, west to the Gök or Geyee Mountains, east to Transcaspia, Armenia, Kurdistan, and Northern Persia, north to the Caucasus.

Like *T. caucasicus* the present species inhabits the more elevated portions of the mountains, and is extremely shy and wary. It feeds on bulbous roots, young grass blades, moss and scale-fern, and the young are probably fed on insects. The call-note is a full clear prolonged whistle ending with an abrupt jerk, and the male utters a loud cackle which is continued during flight. It breeds late in April, the nest being a deep round hollow scraped in the stony soil, slightly lined with dry grass and a few feathers, and the eggs, 6 to 9 in number, resemble those of *T. caucasicus* both in size and colour, but are, if anything, a trifle darker in ground colour.

964. HIMALAYAN SNOW-PARTRIDGE.

TETRAOGALLUS HIMALAYENSIS.

Tetraogallus himalayensis, Gray, P.Z.S. 1842, p. 105 ; Gould, B. of As. vii. pl. 30 ; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 106 ; Blanf. F. Brit. Ind. Birds, iv. p. 143 ; *T. nigellii*, Jard. and Selby, Ill. Orn. pl. 141 (nec. pl. 76) ; Hume and Marsh, Game B. iii. pl. 3 (egg).

Kulla Lupu Baera, in W. Nepal ; *Kabk-i-dara*, in Afghanistan.

♂ *ad.* (Himalayas). Differs from *T. caucasicus* in having the head, hind neck and fore back pale blue-grey, the sides of the neck marked with chestnut ; upper parts paler and greyer, the spots redder ; chin and upper throat white, below which is a narrow, indistinct chestnut band ; breast white, tinged with grey, sparingly marked with dark chestnut ; rest of under parts slaty blue slightly vermiculated with brown and striped with rich chestnut and black ; under tail-coverts white ; bill pale horn, legs yellowish red ; iris dark brown ; naked skin behind the eye yellow. Culmen 1·6, wing 12·0, tail 8·4, tarsus 2·5 inch. The female resembles the male, but lacks the spurs.

Hab. Himalayas, west of Kumaun at about 11,000 to 18,000 feet in summer, lower in winter, Afghanistan and the various ranges north to the Altai.

Is chiefly to be met with near the snow-line, on rocks and barren ground, usually in flocks or coveys, and feeds on grass, tender shoots, bulbs, and seeds. Its note is a soft whistle. The nest is a mere depression scratched in the ground under shelter of a rock, stone, or bush, and the eggs, 5 to 6 in number, are usually deposited late in April, and are paler or darker olive-brown spotted or blotched with brownish red, pale chestnut, or purplish brown, and measure about 2·72 by 1·85.

965. TIBETAN SNOW-PARTRIDGE.

TETRAOGALLUS TIBETANUS.

Tetraogallus tibetanus, Gould, P.Z.S. 1853, p. 47 ; id. B. of As. vii. pl. 32 ; David and Oust. Ois. Chine, p. 391 ; Prjev. Mongol. i Strana Tangut. ii. p. 127 ; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 104 ; Berezoff. and Bianchi, Ptitz. Gan-su, etc. p. 14.

Hrak-pa, Bhot. ; *Hailik*, Mongol. ; *Cunmo*, Tangut.

♂ *ad.* (Tibet). Differs from *T. altaicus* in being smaller, the head, neck, and upper breast darker slate-grey, gradually merging into the colour of the back; upper parts more marked with white, the outer webs of secondaries white; upper breast crossed by an irregular white band; under parts white with black stripes, which are bolder on the flanks; under tail-coverts black with broad terminal central white stripes; middle tail-feathers like the back, the rest brownish black tipped with rufous buff; bill orange-red; legs coral-red; iris brown. Culmen 1·52, wing 10·5, tail 6·7, tarsus 2·0 inch. Female similar but without the spur.

Hab. The mountains of Kan-su, Koko-nor, Eastern Turkestan and Northern Tibet east to the Sanju Pass at from 10,000 to 16,000 feet altitude.

In general habits it resembles *T. altaicus* and is very wary and shy. When at rest it utters a note like that of the domestic hen, occasionally interrupted by a peculiar whistle; when alighting it utters *click, click, click* several times in succession; when settling down it makes a sound like *goooo, goooo,* and when collecting its young its call-note is a whistle. Its eggs resemble those of *T. himalayensis,* and measure about 2·4 by 1·7.

966. ALTAI SNOW-PARTRIDGE.

TETRAOGALLUS ALTAICUS.

Tetraogallus altaicus (Gebler), Bull. Sci. Acad. St. Petersb. i. p. 31 (1837); Gould, B. of As. vii. pl. 31; (Tacz.), F. O. Sib. O. p. 775; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 110.

♂ *ad.* (Altai Mountains). Differs from *T. himalayensis* in having the head, fore back, and upper breast pale blue-grey unmarked with chestnut; a patch in front of the eye, a narrow supercilium, chin, and middle of upper throat white; breast sparingly marked with white and black; a black line across the upper back; rest of upper parts as in *T. himalayensis*, but greyer and only marked with white; primaries brown, not white on basal portion; under parts white, the thigh-feathers and lower flanks dark slaty blackish; bill blackish horn; legs orange; iris brown. Culmen 1·5, wing 11·0, tail 7·0, tarsus 2·35 inch.

Hab. The Altai Mountains.

In habits and nidification this bird is said to resemble *T. himalayensis,* and its eggs, which are deposited in May, resemble those of that species but are paler. One in my collection measures 2·64 by 2·0.

LAGOPUS, Briss., 1760.

967. WILLOW GROUSE.

LAGOPUS ALBUS.

Lagopus albus (Gmel.), Syst. Nat. p. 750 (1788); (Naum.), vi. p. 381, Taf. 159; Dresser, vii. p. 183, pls. 483, 484 fig. 1, 485 (feet only); Elliot, Monogr. Tetr. pls. xvii. xviii.; *Tetrao. lagopus*, Linn. Syst. Nat. i. p. 274 (1766); (Ogilvie Grant), Cat. B. Br. Mus. xxii. p. 40; Ridgway, p. 199; *L. subalpina* (Nilss.), Orn. Suec. p. 307 (1817); *L. brachydactylus*, Gould, B. of E. iv. pl. 256.

Lirype Dalrype, Norweg. and Dan.; *Dalripa*, Swed.; *Rievsak*, Lapp.; *Riekko*, Finn.; *Koropatka*, Russ.

♂ *ad. in spring* (Finland). Head, neck, breast, upper flanks, and upper parts rich dark red, the crown marked, and the neck, breast, and back more or less vermiculated with black; rump and upper tail-coverts partly white; wings, middle tail-feathers, nostrils, region round and behind the eye, a small space at the base of the lower mandible, and under parts white; rest of tail-feathers blackish partially tipped with white; comb above the eye red; bill blackish horn; iris brown. Culmen 0·88, wing 8·1, tail 5·1, tarsus 1·7 inch. Later on in the summer the white is restricted to the wings and middle of the abdomen. The female is somewhat smaller and duller in colour. In the winter both sexes have the whole plumage pure white except the tail, which is black tipped with white.

Hab. Europe from Central Scandinavia to the extreme north; not found in Britain or Iceland; Asia, north to Kamchatka, south to the Amoor; Arctic America beyond the United States; Newfoundland.

During the spring and summer it is found in pairs, usually in the tracts covered with low bushes, but in the winter large flocks are often seen. It feeds on seeds of various kinds, berries, and the tender shoots of the birch and willow. Its call-note is similar to that of the Red Grouse, and when in the spring it struts before the female the male utters a clear note, *kavao kavao*, which the female answers with a subdued mewing note, *neiau neeau*. When startled and taking wing the male utters a cackling note like that of *L. scoticus*. The Willow Grouse is monogamous, and the female deposits late in May, in a depression scratched under a bush and scantily lined with a few grass stems or twigs, her 8 to 14, sometimes even more, eggs, which closely resemble those of *L. scoticus* in size, colour, and markings. The Newfoundland bird has been subspecifically separated by Dr. Stejneger under the name *Lagopus lagopus alleni*.

968. Red Grouse.

LAGOPUS SCOTICUS.

Lagopus scoticus (Lath.), Ind. Orn. ii. p. 641 (1790); Hewitson, i. p. 279, pl. lxx. figs. 1, 2; Gould, B. of E. iv. pl. 252; id. B. of Gt. Brit. iv. pl. 7; Elliot, Monogr. Tetr. pl. xix.; Dresser, vii. p. 165, pl. 479; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 35; Saunders, p. 495; Lilford, iv. p. 107, pl. 46.

♂ *ad.* (Scotland). General plumage blackish brown vermiculated with rusty red, the head, neck, breast, rump, and upper tail-coverts more rusty red in colour; wings and tail blackish brown, the middle tail-feathers vermiculated with reddish brown; feathers over and under the eye, and an irregular line from the base of the lower mandible, white; some of the abdominal feathers tipped with white; leg feathering greyish brown above, merging into dirty white towards the feet; beak dark horn; comb red; iris hazel. Culmen 0·85, wing 8·2, tail 4·2, tarsus 1·8 inch. The female is somewhat smaller and paler, the general colour being warm yellowish brown barred and vermiculated with black. Unlike the Willow Grouse, the Red Grouse has no special winter plumage. Specimens from England, Scotland, Wales, and Ireland vary considerably in tone of colour.

Hab. The British Islands only, except where introduced.

Inhabits the moors and open places in various parts of the United Kingdom, chiefly in the north, and is highly esteemed as a game bird. It feeds on berries, tender shoots of the heather and ling, also grain when obtainable, &c. It is strong on the wing, and when taking flight, or when danger threatens, the male utters a note of warning, *kok, kok, kok.* During the breeding season the grouse are in pairs, but in the autumn in coveys and sometimes in flocks or packs. The nest is a mere hollow scratched in the ground, scantily lined with grass, moss, or heather twigs, and in April or May, 8 to 12 eggs are deposited, which are pale olive or olive-buff, strongly spotted and blotched with dark reddish brown or blackish brown, and vary considerably. In size they measure about 1·75 by 1·33.

969. Alpine Ptarmigan.

LAGOPUS MUTUS.

Lagopus mutus (Montin.), Physiogr. Sällsk. Handl. Lund. i. p. 155 (1776–86); Hewitson, i. p. 280, pl. lxx. fig. 3; Gould, B. of E. pl. 253, 254; id. B. of Gt. Brit. iv. pls. 8, 9, 10; Dresser, vii. p. 157, pls. 478, 484, fig. 2; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 44; Saunders, p. 497; Lilford, iv. p. 112, pls. 47, 48, 49; *Tetr. lagopus*, Scop. Ann. i. p. 118 (1769 nec. Linn.); Naum. vi. p. 401, Taf. 160, 161; *T. alpinus*, Nilss. Orn. Suec. i. p. 311 (1817).

Perdrix blanche, French; *Perdiz blanca*, Span.; *Roncaso*, Ital.; *Schneehuhn*, German; *Fjeldrype*, Dan. and Norweg.; *Fjällripa*, Swed.; *Kirun*, Lapp.; *Kiiruna*, Finn.

♂ *ad. in summer* (Norway). Head, neck, breast, upper back, and upper flanks black, on the neck slightly intermixed with white, the chin nearly pure white; lower back, inner wing-coverts, scapulars, rump, and upper tail-coverts black vermiculated with brown, here and there narrowly marked with white; tail blackish, the middle feathers narrowly tipped with white; wings, lower breast, and under parts white; bill blackish horn; iris brown. Culmen 1·05, wing 7·7, tail 4·8, tarsus 1·35 inch. The female has the head, neck, upper parts, breast, and flanks blackish, marked, barred, and vermiculated with rusty yellow, and here and there marked with white. In the autumn the male has the head, neck, upper parts, upper breast, and flanks ashy grey, narrowly vermiculated with black, the head and neck tinged with reddish brown. In the winter both sexes are pure white, the tail only black tipped with white, but the male has the lores black.

Hab. The mountains of Scandinavia, Scotland, the Ural, Pyrenees, Alps, Tyrol, Styria, and Carinthia; how far its range extends in Asia it is impossible to state with certainty.

Is essentially a mountain bird, inhabiting elevated, barren, rocky and stony localities, only descending to lower altitudes when driven by stress of weather. Its food consists of tender shoots, seeds, and berries; in its flight it resembles *L. scoticus*, but its call- or alarm-note is a harsh frog-like croak. It breeds high up in the mountains, its nest being a mere depression scratched in the ground, under a bush or stone, scantily lined with grass-bents or twigs, and the eggs, which are deposited late in May or early in June, 7 to 10 or 12, seldom more, in number, resemble those of *L. scoticus*, but the ground-colour is paler, and they are smaller, measuring about 1·67 by 1·14.

970. Rock-Ptarmigan.

LAGOPUS RUPESTRIS.

Lagopus rupestris (Gmel.), Syst. Nat. i. p. 751 (1788); Audub. B. Am. pl. 301; Dresser, vii. p. 175, pls. 480, 481; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 48; Ridgway, p. 200; Elliot, Monogr. Tetr. pl. 23; *L. islandorum*, Faber, Prodr. Isl. Orn. p. 6 (1822).

Riupa, ♂ *Kieri*, Icel.

♂ *ad.* (Iceland). Differs in summer plumage from *L. mutus* in having the head, neck, upper parts, and breast blackish brown barred and vermiculated with reddish brown; supraocular comb light vermilion; bill brownish horn; iris dark hazel. Culmen 1·0, wing 7·82, tail 4·95, tarsus 1·2 inch. In the autumn dress it is browner than *L. mutus.* The female is yellower and more ochreous in tone than the female of *L. mutus.* In the winter both sexes are white like *L. mutus.*

Hab. Iceland; Greenland; Northern Asia; Kamchatka; Bering Island; Aleutian Islands; Arctic North America and Newfoundland.

In habits and nidification this bird does not differ from *L. mutus,* and its eggs are undistinguishable from those of that species.

971. SUBSP. LAGOPUS HYPERBOREUS.

Lagopus hyperboreus, Sundevall, in Gaim. Voy. Scand. Atl. Livr. xxxviii. and pl. (1838); Elliot, Monogr. Tetr. pl. 24; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 51; *L. hemileucurus,* Gould, P.Z.S. 1858, p. 354; Dresser, vii. p. 179, pl. 482.

♂ *ad.* (Spitsbergen). Differs from *L. rupestris* in having the tail white at the base and tip, black only in the middle, the two middle feathers white with an irregular oval black mark in the middle, and the outside feathers broadly edged with white. Culmen 0·7, wing 7·6, tail 5·8, tarsus 1·1 inch.

Hab. Spitsbergen.

In habits and nidification this bird does not differ from *L. mutus* and *L. rupestris.*

TETRAO, Linn., 1766.

972. CAPERCAILLY.

TETRAO UROGALLUS.

Tetrao urogallus, Linn. Syst. Nat. i. p. 273 (1766); Naum. vi. p. 277, Taf. 154, 155; Hewitson, i. p. 277, pl. lxix. fig. 2; Gould, B. of E. iv. pl. 248; id. B. of Gt. Brit. iv. pl. 5; Dresser, vii. p. 223, pls. 489 fig. 2, 490; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 60; Saunders, p. 491; Lilford, iv. p. 101, pl. 44.

Coq de bruyère, French; *Gran Gallo de bosque,* Span.; *Gallo cedrone,* Ital.; *Auerhahn* ♂ and *-huhn* ♀, German; *Tjur,* Dan.; *Tiur* ♂, *Röj* ♀, Norweg.; *Tjäder,* Swed.; *Cukca* ♂, *Koappil* ♀, Lapp.; *Metso* ♂, *Koppelo* ♀, Finn.; *Glouhar* ♂, *Kopoluha* ♀, Russ.

♂ *ad.* (Sweden). Head and neck slate-grey narrowly barred with black; chin-feathers much elongated, black glossed with purple; back, scapulars, and wing-coverts dark reddish brown vermiculated with black; rump and upper tail-coverts black vermiculated with greyish white, the latter tipped with white; tail rounded, black, some of the feathers marbled with white, which forms an irregular band; quills brown externally marbled with pale sandy brown; breast and under parts black, the former glossed with green; abdomen blotched with white; under tail-coverts marked and tipped with white; tarsi feathered to the feet; feet dull brown; bill whitish horn; iris brown. Culmen 2·5, wing 14·8, tail 11·0, tarsus 3·0 inch. The female is rather smaller, has the head, neck, and upper parts and tail pale rusty red barred with black, many of the feathers tipped with white; tail tipped with white; chin, sides of head, neck, and breast pale rufous, the lower neck spotted with black; rest of under parts pale rufous sparingly barred with black, and broadly tipped with white; vent and tarsi whitish; bill dull horn, paler at the base below.

Hab. The pine forests of Scandinavia, North Russia, extinct but introduced into Scotland, the Pyrenees, Alps, and Carpathians; North Asia, east to Lake Baikal, south to the Altai and north-eastern Turkestan.

Inhabits pine woods and feeds on tender conifer shoots, berries, &c. The pairing game, or play (*lek* in Swedish), commences early in spring, when the male, with drooping wings, expanded and erected tail, and ruffled feathers, seated either on a tree or strutting on the ground, utters his call, *pellep, pellep, pellep,—klickop—hede, hede, hede,* which is answered by a croaking note, *gock, gock, gock,* by the female, and during this season the males fight furiously for the possession of the females, who after the pairing season retire to their breeding places. The nest is a mere depression scraped in the ground under a tree or bush, and the eggs, 6 to 12 or 15 in number, are deposited early in May, and are dirty yellowish spotted and blotched with light brown and measure about 2·7 by 1·65.

Hybrids between *Tetrao tetrix* and *T. urogallus* are not uncommon, but those between *Phasianus colchicus* and *T. urogallus*, and *Lagopus albus* and *T. urogallus* are much rarer.

973. SUBSP. TETRAO URALENSIS.

"*Tetrao uralensis*, Severtz. and Menzb." Nazaroff, Bull. Mosc. lxii. part 2, p. 365 (1886, desc. null.); Menzbier, Ibis, 1887, p. 303; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 65; Dresser, ix. p. 331, pl. 705.

♂ *ad.* (Ural). Differs from *T. urogallus* in being paler and greyer, the tail conspicuously marked with white, and the abdomen white, but slightly marked on the sides and upper parts with blackish. Culmen 2·4, wing 15·5, tail 12·25, tarsus 3·2 inch. The female is paler than that of *T. urogallus*, the feathers on the upper parts have broad, white margins, and the abdomen is white with but few black and pale rufous markings, the lower abdomen nearly pure white.

Hab. The southern branches of the Ural range.

In habits it is said to resemble *Tetrao tetrix* more than *T. urogallus*, and its note is also said to differ from that of the latter species.

974. SIBERIAN CAPERCAILLY.

TETRAO PARVIROSTRIS.

Tetrao parvirostris, Bp. Compt. Rend. xlii. p. 880 (1856); Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 66; *T. urogalloïdes*, Midd. Sib. Reis. ii. pl. 2, p. 195, Taf. xviii. figs. 1–3 (1851 nec. Nilss.); Elliot, Monogr. Tetr. pl. vi.; David and Oust. Ois. Chine, p. 390; *T. urogalloïdes* var. *sachalinensis*, Bogdanoff, Consp. Av. Ross. fasc. i. p. 122 (1884).

♂ *ad.* (Saghalien). General colour of plumage black; head and neck glossed with purplish blue, the breast with bottle-green; upper parts dull black, the scapulars, secondaries, and larger wing-coverts with terminal white spot; upper tail-coverts irregularly tipped with white; under parts brownish black slightly spotted with white, and indistinctly vermiculated on the flanks; tail uniform black, much graduated and long; bill black; iris brown; bare skin round the eye scarlet; bill much smaller than in *T. urogallus*, 0·9 from the end of feathering to tip; wing 15·3, tail 14·9, the outer feather 4·2 shorter than the middle ones, tarsus 3·0 inch. The female is distinguishable from that of *T. urogallus* not only by the white on the scapulars, secondaries, and wing-coverts, and on the upper tail-coverts, but by the long, greatly graduated tail.

Hab. The Transbaikal country to the southern portion of the sea of Ochotsk; the lower Amoor and the island of Saghalien; of rare occurrence in the mountains of the north of China.

This Capercailly is said to differ considerably from *T. urogallus* both in its play or "lek" and in its note, but it frequents the pine forests like that species. Its "lek" is, however, almost always performed, like that of *T. tetrix*, on the ground, and seldom on a tree. The nest is a mere depression scratched in the ground, and the eggs, which are deposited late in May, resemble those of *T. urogallus*, but are more oblong in shape, and measure about 2·38 by 1·60.

975. SUBSP. TETRAO KAMTSCHATICUS.

Tetrao kamtschaticus, Kittlitz, Denkw. einer Reis. Russ. Am. etc. i. p. 314 (1858); Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 67; Tacz. F. O. Sib. O. p. 763.

♂ *ad.* In general colouration intermediate between *T. urogallus* and *T. parvirostris* and approaches nearer the former in colouration, but has the head and neck but slightly vermiculated, the upper parts less rufous brown, the scapulars and tail coverts broadly marked with white, forming continuous bands; bill small as in *T. parvirostris*; bill from end of feathering to tip 0·8, wing 14·7, tail 11·0, tarsus 3·3; outer tail feathers 3·2 inch shorter than the middle ones.

Hab. The peninsula of Kamchatka.

In habits it does not differ from *T. parvirostris,* but I do not find any record of its nidification.

976. BLACK GROUSE.

TETRAO TETRIX.

Tetrao tetrix, Linn. Syst. Nat. i. p. 274 (1766): Naum. vi. p. 324, Taf. 157; Gould, B. of E. iv. pl. 250; id. B. of Gt. Brit. iv. pl. 6; Hewitson, i. p. 278, pl. lxix. fig. 1; Dresser, vii. p. 205, pl. 487; (Elliot), Monogr. Tetr. pl. xii.; (Ogilvie Grant), Cat. B. Br. Mus. xxii. p. 53; Tacz. F. O. Sib. O. p. 766; Saunders, p. 493; Lilford, iv. p. 106, pl. 45.

Coq de bruyère, French; *Pequeño; Gallo de bosque,* Span.; *Fagiano di monte,* Ital.; *Birkhahn* ♂, *Birkhuhn* ♀, German; *Berkhoen,* Dutch; *Urfugl,* Dan.; *Aarfugl,* Norweg.; *Orre,* Swed.; *Teiri, Tetri,* Finn.; *Tetereff* ♂, *Kosach* ♀, Russ.

♂ *ad.* (Sweden). General colour black, glossed with blue on the head, neck, and upper parts; secondaries and larger wing-coverts white on the basal portion, forming a conspicuous alar patch; outer tail-feathers elongated and curved outwards; lower abdomen and thighs varied with greyish white; under wing- and tail-coverts white; over the eye a large red warty comb; bill black; feet and iris dark brown. Culmen 1·1, wing 10·4, tail in the middle 4·2, outer feathers 8·5, tarsus 1·8 inch. Female: upper parts rich rufous tinged with grey, the feathers banded or marked with black, the secondaries at the base and tip white, forming two indistinct alar bars; tail forked; breast more rufous and less marked with black than the other parts; middle of abdomen and legs greyish white, the latter indistinctly marked with dull brown; under tail- and wing-coverts white barred with brown and black.

Hab. Europe, from about lat. 67° in Scandinavia south to North Italy and Styria; west to Great Britain; Asia, east to Eastern Siberia, north to 67° N. lat. on the Yenesei, south to Turkestan, Manchuria, and, it is said, to North China.

Like the Capercailly the Black Grouse is an inhabitant of the forest and woodland, but in Scotland it is found on the moors, and is as a rule shy and and wary. It feeds on tender twigs, berries, seeds, &c., and is more of a ground bird than *T. urogallus.* In the spring it frequents a "lek" or drumming place, where the males fight for the possession of the females, and it is almost always held on the ground, in an open place in the forest, or a tree-surrounded morass, for this species is also polygamous. The call-note is loud and clear, and can be heard at a long distance. The "lek" lasts about 8 to 14 days, after which the females retire to their breeding places. The nest is a depression in the ground, sometimes scantily lined with grass or leaves, and the eggs, 6 to 10 or 12 in number, which are usually deposited in May, are yellowish white spotted and blotched with yellowish red and rusty red, and measure about 2·0 by 1·42.

The Black Grouse not unfrequently interbreeds with other species, and wild hybrids have been obtained between it and *Tetrao urogallus, Lagopus albus, L. scoticus, Tetrastes bonasia,* and *Phasianus colchicus.*

977. GEORGIAN BLACK GROUSE.

TETRAO MLOKOSIEWICZI.

Tetrao mlokosiewiczi, Tacz. P.Z.S. 1875, p. 266 ; Dresser, vii. p. 219, pl. 488 ; (Olgilvie Grant), Cat. B. Br. Mus. xxii. p. 58 ; *T. acatoptricus*, Radde, Orn. Cauc. p. 358, pl. xxiii.

Tetereff tschernysch, Russ.; *Jaban-tank*, Persian ; *Paitmorek*, Armen.; *Kara-touch*, Tartar.

♂ *ad.* (Georgia). Differs from *T. tetrix* in lacking the white on the upper surface of the wing, in having the under tail-coverts black, and the tail with the tip bent downwards and slightly outwards ; the glossy parts of the plumage with bottle-green reflections. Culmen 1·05, wing 7·9, tail 9·0, tarsus 2·25 inch. The female is greyish closely vermiculated with blackish brown and rusty brown, the upper parts more rufescent than the under parts ; throat white ; secondaries and under tail-coverts tipped with white ; tail long, nearly square, blackish brown closely variegated with rufous and sandy yellow ; middle of abdomen marked with black.

Hab. The whole of the Caucasus Mountains.

Is a mountain bird, inhabiting high altitudes on the borders of tree growth and the rhododendron zone at from 6,000 to 8,000 and even 11,000 feet altitude, and never descends into the valleys. In habits it resembles *T. tetrix,* and like that bird is polygamous, and in the pairing season frequents certain spots where the males "drum" and fight for the possession of the females. The nest is a hollow scratched in the soil, usually under shelter of a rock, and the eggs, 8 to 10 in number, are usually deposited in May or early in June, and resemble those of *T. tetrix* both in ground-colour and markings, but are considerably paler. In size they vary from 1·78 by 1·26 to 2·7 by 1·37.

978. Siberian Spruce Grouse.

TETRAO FALCIPENNIS.

Tetrao falcipennis, Hartl. J. f. O. 1855, p. 39; (Ogilvie Grant), Cat. B. Br. Mus. xxii. p. 72; (Tacz.), F. O. Sib. O. p. 770; *Tetrao canadensis* var. *franklini*, Middend. Sib. Reise, ii. part 2, p. 202, Taf. xvii. fig. 4 (1851); *Falcipennis hartlaubi*, Elliot, Monogr. Tetr. pl. xi.

Dikushka, Russ.; *Karáka*, Tungus.

♂ *ad.* (E. Siberia). Head and neck black, the feathers tipped with pale dull brown; sides of head, chin, upper throat, and lower neck almost uniform black; upper parts blackish vermiculated with brown, the scapulars and wings sparingly marked with white; lower back, rump, and upper tail-coverts with thick white stripes; tail black, the middle feathers terminally vermiculated with brownish, the rest broadly terminated with white; lower throat marked with buffy white; under parts black with a subterminal white band on the feathers; middle of abdomen black; vent nearly white; thigh and leg-feathers smoky brownish; under tail-coverts black, broadly tipped with white; feet and bill dark horn, the lower mandible paler; iris yellowish brown; outer quills tapered, narrow, and sickle-shaped. Wing 7·2, tail 4·7, tarsus 1·4 inch. The female has the head, neck, and upper parts rufous, barred and vermiculated with black, and the under parts rufous varied with black and white.

Hab. Kamchatka, North-eastern Siberia, the lower Amoor, and the island of Saghalien.

In habits it resembles *Tetrao canadensis*, to which species it is nearly allied, and like it frequents conifer woods and is extremely tame, so much so that it is often killed by the natives with a stick. I find nothing on record respecting its nidification.

TETRASTES, Keys. and Blas., 1840.

979. Hazel Hen.

TETRASTES BONASIA.

Tetrastes bonasia (Linn.), Syst. Nat. i. p. 275 (1766); (Naum.), vi. p. 358, Taf. 158; David and Oust. Ois. Chine, p. 390; (Seebohm), B. Jap. Emp. p. 373; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 90; Tacz. F. O. Sib. O. p. 772; *Bonasia europæa*, Gould, B. of E. iv. pl. 251; *B. betulina* (Scop.), Ann. i. p. 119 (1769); Dresser, vii. p. 193, pl. 486.

Gélinotte, French; *Grebul, Fabot*, Span.; *Francolino di monte*, Ital.; *Haselhuhn*, German; *Hjerpe, Hasselhöne*, Dan.; *Jerpe*, Norweg.; *Hjerpe*, Swed.; *Bakkus, Puogga*, Lapp.; *Pyy*, Finn.; *Riabchik*, Russ.; *Yezo-Rai-cho, Yamadori*, Jap.

♂ *ad.* (Sweden). Upper parts grey, in parts tinged with rufous, barred with blackish and brown; head crested; lores, a spot under, and a line behind the eye white; cheeks and a band down the sides of the neck white, slightly marked with black; lower back, rump, and upper tail-coverts clearer grey and less marked with blackish; tail ashy grey freckled with blackish and all but the middle feathers tipped with white, and with a sub-apical black band; moustachial region and throat deep black; under parts white slightly mottled with brown, the breast tinged, and the flanks distinctly marked with rusty red; bill blackish horn; lower half of the tarsus bare, and with the feet reddish brown tinged with grey; iris nut-brown; eyelid rich red. Culmen 0·8, wing 6·3, tail 4·7, tarsus 1·25 inch. The female has the throat fulvous white sparingly marked with black, and the white band on the neck is more indistinct.

Hab. Scandinavia to about lat. 67° in Lapland, North Russia, Germany, the western Pyrenees, Jura and Alps, North Italy, the Carpathians, and Styrian Alps; Northern Asia, east to Japan, north to Kamchatka, south to the Altai range, Manchuria and North China.

Is a resident frequenting mixed conifer and deciduous woods, and especially aspen and birch groves. It feeds on buds and tender shoots, seeds, berries, and insects, and seeks its food to a large extent on the ground. When flushed it will perch, and sit motionless squatted close to the branch like its American allies. The call-note of the male is a somewhat low, prolonged whistle, and that of the female a single sustained *tih*. It is strictly monogamous, and nidification commences early in May. The nest is carefully concealed, and is a depression scratched in the ground, but scantily lined with a little grass, and the eggs, 10 to 14 in number, are rather elongate in shape, tapering somewhat towards the smaller end, pale yellowish or orange yellowish in ground-colour, sparingly spotted with rufous, and measure about 1·65 by 1·16.

Specimens from different localities vary somewhat, those from the high north being greyer, and those from Central and Southern Europe more rufous.

980. MENZBIER'S HAZEL GROUSE.

TETRASTES GRISEIVENTRIS.

Tetrastes griseiventris, Menzbier, Bull. Mosc. lv. pt. i. p. 105, pl. iv. (1880); (Dresser), ix. p. 329, pl. 704; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 93.

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♂ *ad.* (Russia). Differs from *T. bonasia* in being much darker and duskier; upper parts dark grey, the head and back barred with blackish, the former darker; rump and upper tail-coverts dark grey with indistinct darker bars; tail like that of *T. bonasia*, but the subterminal band scarcely indicated, and the white tip wanting; chin and a streak from above the eye white; throat black slightly marked with dark rufous; neck and breast grey barred with black and marked with rufous; rest of under parts grey indistinctly barred with black; flanks tinged with rufous; bill blackish horn; feet greyish brown; iris brown. Culmen 0·9, wing 6·6, tail 4·8, tarsus 1·35. The female is browner and less grey in colour, and the black feathers on the throat are broadly tipped with buff.

Hab. The Perm and Olonetz Governments west of Ural, Russia.

I do not find anything on record respecting the habits and nidification of this species, which probably do not differ from those of *T. bonasia.*

981. MONGOLIAN HAZEL GROUSE.

TETRASTES SEVERTZOVI.

Tetrastes severtzovi, Prjevalsky, Mongol i Strana Tangut, &c. ii. p. 130, Taf. xviii. (1876); Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 93.

♂ *ad.* (Kan-su). Differs from *T. bonasia* in having the crown, nape, neck, and upper parts generally warm reddish brown instead of grey in ground-colour, and the whole of the lower back, rump, and upper tail-coverts clearly barred with black; under parts darker than in *T. bonasia*, being black with a bar across the middle and the tips white; breast washed with warm reddish brown. Culmen 0·7, wing 7·0, tail 5·60, tarsus 1·3 inch. The female is a trifle smaller and has the chin and throat pale yellow marked with black.

Hab. The mountains of Kan-su, Koko-nor, and the Hoang-ho river.

In general habits and note it is said to resemble *T. bonasia.* It inhabits the mountains up to about the elevation of 11,000 feet, frequents the larch and fir forests, and particularly affects small ravines through which brooks run, and which have the sides thickly covered with bushes. So far as I can ascertain, its nest and eggs are not known.

TURNIX, Bonnat., 1790.

982. Andalucian Hemipode.

TURNIX SYLVATICA.

Turnix sylvatica (Desfont), Mém. de l'Acad. Roy. des Sc. Paris, 1787, p. 500, pl. xiii.; Dresser, vii. p. 249, pl. 494; Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 537; Saunders, p. 506; *T. andalusica* (Gmel.), Syst. Nat. i. p. 766 (1788); *T. africana*, Bonn. Tabl. Encycl. Méth. i. p. 6 (1790); Gould, B. of Gt. Brit. iv. pl. 16; Hewitson, Ibis, 1859, pl. ii. figs. 4, 5 (eggs); *Hemipodius tachydromus*, Temm. Pig. and Gall. iii. p. 626 (1815); Gould, B. of E. iv. p. 264.

Toirão do mato, Portug.; *Torillo*, Span.; *Quaglia tridattila*, Ital.; *Semmana*, Arab.; *Zerquil*, Moor.

♂ *ad.* (Spain). Head blackish brown marked with reddish brown, and with a central brownish buff streak; cheeks, sides of head, and upper throat buffy white, barred with black, upper parts blackish brown transversely marked with chestnut and black; wing-coverts ochreous chestnut, blotched and spotted with black, and broadly marked with buffy white; quills blackish brown externally edged with buffy white; sides of throat, neck, and flanks buffy white, each feather with a large blackish brown crescentic mark; middle of throat warm pale ferruginous, fading to buffy white towards the abdomen; under tail-coverts warm ochreous; bill dull fleshy becoming blackish at the tip; legs light brown, the hind toe wanting; iris light brown. Culmen 0·5, wing 3·3, tail 1·7, tarsus 1·0 inch. The female is larger, has the nape nearly uniform dull light red, and the under parts are richer coloured.

Hab. Portugal, Spain, has once occurred in Italy, but is fairly common in Sicily, and is said to be very rare in Southern France; North Africa. Of very doubtful occurrence in Britain.

Frequents dense bush-covered localities, where it hides and is very difficult to flush, being as a rule very shy and wary. Its ordinary note is *crroou, crroou, crroou,* but in the early morning and late in the evening both sexes utter a deep mournful note like the distant bellowing of a bull. Throughout its range it appears to be resident. It feeds on seeds of various kinds, and insects. It is monogamous, and makes its nest, which is a scantily lined depression in the ground, under shelter of a bush in some dense thicket. Its eggs, which are deposited late in June or early in July, 4 to 6 in number, are greyish or buffy white rather closely marked with pale purplish grey shell spots and dark brown or purplish brown surface blotches, and measure about 1·0 by 0·78.

983. BURMESE HEMIPODE.

TURNIX BLANFORDI.

Turnix blanfordi, Blyth, J. A. Soc. B. xxxii. p. 80 (1863); Ogilvie Grant, Cat. B. Br. Mus. xxii. p. 542; Blanf. F. Brit. Ind. Birds. iv. p. 155; *T. maculatus*, Vieill. Nouv. Dict. xxxv. p. 47 (1819, nec. Temm.), David and Oust. Ois. Chine, p. 398; (Tacz.), F. O. Sib. O. p. 783; *T. variabilis*, Prjev. Voy. Oussouri. Suppl. No. 139.

Ngon, Burm.

♂ *ad.* (Burma). Crown black varied with chestnut; mesial line warm buff; sides of head to above the eye pale yellowish buff, finely variegated with black; upper parts greyish varied with chestnut and buff; wing-coverts spotted with black on warm creamy buff; chin and upper throat buffy white, the lower neck pale rusty; rest of under parts whitish, becoming warm creamy buff on the flanks and under tail-coverts; sides of breast and flanks spotted with black; bill brown, the base of the lower mandible, legs, and feet yellow; iris yellowish white. Culmen 0·65, wing 3·6, tail 1·3, tarsus 0·95 inch. The female is larger, has the mesial line less distinct or absent, is altogether brighter in colour and has a broad ferruginous collar round the lower neck.

Hab. India (Assam, the Khasi Hills, Tipperah and Chittagong) Burma; China; Manchuria; South-east Mongolia, Ordos, Kan-su and Koko-nor.

Inhabits grassy localities, gardens, and in Mongolia marshy places such as are frequented by Snipe, and is a silent shy bird. Nothing appears to be known respecting its nidification.

RALLUS, Linn., 1766.

984. WATER-RAIL.

RALLUS AQUATICUS.

Rallus aquaticus, Linn. Syst. Nat. i. p. 262 (1766); Naum. ix. p. 472, Taf. 235; Hewitson, ii. p. 322, pl. xc. fig. 2; Gould, B. of E. iv. pl. 339; id. B. of Gt. Brit. iv. pl. lxxxvi.; Dresser, vii. p. 257, pl. 495; Sharpe, Cat. B. Br. Mus. xxiii. p. 20; Blanford, F. Brit. Ind. iv. p. 160; Saunders, p. 515; Lilford, iv. p. 139, pl. 60.

Râle d'eau, French; *Frango d'agua*, Portug.; *Rascón*, Span.; *Porciglione*, Ital.; *Wasserralle*, German; *Watterval*, Dutch; *Kéldusvin*, Icel.; *Vandrixe*, Dan. and Norweg.; *Vattenralle*, Swed.; *Rantakana*, Finn.; *Vodjanoi-Pastuschok*, Russ.

♂ *ad.* (England). Crown, nape, and hind neck blackish, marked with fulvous brown; upper parts warm olive-brown blotched with blackish; quills olivaceous brown; tail darker, the feathers margined with olivaceous brown; lores sooty blackish; sides of head, throat, neck, breast, and upper abdomen deep slaty blue; lower abdomen and flanks black barred with white; middle of lower abdomen brownish buff; a white patch on the under tail-coverts; bill dark brown, the base of the lower edge of upper mandible red; legs fleshy brown; iris red. Culmen 1·62, wing 4·6, tail 2·12, tarsus 1·72 inch. Female similar but rather duller.

Hab. Europe generally, north to Trondhjem Fjord; Britain; resident in Iceland; North Africa in winter; Asia Minor and Asia east to Yarkand and Cabul; N.W. India in winter, but rare.

Frequents low swampy localities in or near woods, overgrown ditches, &c., and is shy and secretive in its habits. It seldom flies far when flushed, but is able to take extended flights, and swims and even dives with ease. It feeds on worms and aquatic insects, rarely on vegetable substances. Its call-note is a clear *creek*, usually uttered when on the wing, and its cry is loud and peculiar. It breeds in damp, swampy localities, and conceals its nest with care; this is a rather large, loose structure of dry leaves of aquatic plants, and is placed on the ground. The eggs, 8 to 10 in number, are usually deposited in April, and are pale whitish stone-buff, marked with pale purplish shell-spots and dark red surface-blotches and spots, and measure about 1·39 by 1·4.

985. SUBSP. RALLUS INDICUS.

Rallus indicus, Blyth, J. A. S. Beng. xviii. p. 820 (1849); David and Oust. Ois. Chine, p. 489; Seebohm, B. Jap. Emp. p. 359; Sharpe, Cat. B. Br. Mus. xxiii. p. 24; Blanf. F. Brit. Ind. Birds, iv. p. 158; Tacz. F. O. Sib. O. p. 993; *R. japonicus*, Jerd. B. of Ind. ii. p. 727, note (1863); Dresser, vii. p. 261.

Kana-koli, Tam.; *Yay-gyet*, Burm.; *Kuina*, Jap.

ad. (Japan). Differs from *R. aquaticus* in being rather darker, the lores and a broad streak continued behind the eye blackish, and the barring on the under parts extends to the end of the tail-coverts.

Hab. Dauria, Mongolia, Japan, North China; wintering in South China, Burma, India, and Ceylon.

In habits it does not differ from *R. aquaticus*. It breeds in south-eastern Siberia and Japan, its nest and eggs being also similar to those of *R. aquaticus*.

PORZANA, Vieill., 1816.

986. Spotted Crake.

PORZANA MARUETTA.

Porzana maruetta (Leach), Syst. Cat. etc. p. 34 (1816); Gould, B. of Gt. Brit. iv. pl. 88; Dresser, vii. p. 267, pl. 496; Saunders, p. 509; Lilford, iv. p. 130, pl. 56; Blanf. F. Brit. Ind. Birds, iv. p. 166; *Rallus porzana*, Linn. Syst. Nat. i. p. 262 (1766); (Naum.), ix. p. 523, Taf. 237; (Hewitson), ii. p. 318, pl. lxxxix. figs. 2, 3; Gould, B. of E. iv. pl. 343; (Sharpe), Cat. B. Br. Mus. xxiii. p. 93.

Poule d'eau marouette, French; *Frango d'agua*, Portug.; *Polluella*, Span.; *Voltolino*, Ital.; *Punktirtes Rohrhuhn*, German; *Porcelein hoentje*, Dutch; *Plettet Sumphöne Rörvagtel*, Dan.; *Smaaplettet Sumphöne*, Norweg.; *Småfläckig Sumphöna*, Swed.; *Kaisla-rääkkä*, Finn.; *Kamyschnik*, Russ.; *Gurguri-khairi*, Bengal.

♂ *ad.* (Holland). Entire head and upper throat blackish slate-grey, the throat and head in front of the eye unspotted, the crown closely marked with black and dark reddish brown; lores blackish; hind neck and upper parts warm olivaceous brown, the neck closely spotted with white, the rest of upper parts striped and spotted with white and blotched with black; quills and tail olive-brown, the first quill externally margined with white; under parts deep slate-grey, the breast and flanks spotted, and the latter barred with white; middle of abdomen nearly white; under tail-coverts ochreous buff; bill orange-yellow, red at the base; legs yellowish green; iris reddish brown. Culmen 0·85, wing 4·8, tail 2·2, tarsus 1·45, middle toe with claw 1·7 inch. Female similar but smaller and duller, the head, neck, and flanks tinged with brown, and more white on the abdomen.

Hab. Europe generally, north to Trondhjem Fjord in Norway, to Hudiksvall in Sweden, and Archangel in Russia, south to the Mediterranean in winter; Britain; Canaries, rare; North Africa, south to Abyssinia; Asia Minor and Asia, east to Central Asia, and Northern India in winter.

Frequents swampy places where the herbage is thick, and is very secretive and shy. Its call-note is a clear *kweet*, usually heard in the evening or at night, and its food consists of aquatic insects, larvæ, small worms, snails, tender shoots and seeds. Its nest, which is usually well concealed, is a loose structure of flags, reeds, and leaves of aquatic plants, lined with finer materials, and the eggs, 8 to 14 in number, are deposited late in May or early in June, and are rather glossy, ochreous in ground-colour, with violet-grey shell-markings and reddish brown surface spots and blotches, and measure about 1·34 by 0·97.

987. BAILLON'S CRAKE.

PORZANA BAILLONI.

Porzana bailloni (Vieill.), Nouv. Dict. xxviii. p. 548 (1819); (Hewitson), ii. p. 377, pl. cvi. fig. 1; (Gould), B. of E. iv. pl. 344; Dresser, vii. p. 275, pl. 497; Saunders, p. 513; Lilford, iv. p. 135, pl. 59; *P. pygmæa* (Brehm), Lehrb. ii. p. 641 (1824); (Naum.), ix. p. 567, Taf. 239; (Gould), B. of Gt. Brit. iv. pl. 89; ? *Rallus intermedius*, Hermann, Obs. Zool. i. p. 198 (1804); (Sharpe), Cat. B. Br. Mus. xxiii. p. 103.

Poule d'eau Baillon, French; *Polluela chica, Picardó*, Span.; *Schiribilla-grigiata*, Ital.; *Zwerg Sumpfhuhn*, German; *Kleinste Waterhoen*, Dutch.

♂ *ad.* (S. Spain). Crown, nape, and upper parts reddish brown tinged with olivaceous and marked with black; the mantle and rump clearly spotted with white; wings and tail dark brown, the outer web of the first quill white; sides of head, neck, and under parts deep slate-blue; the lower abdomen and flanks, under wing- and tail-coverts black, barred with white; bill sea-green at the base, becoming blackish green towards the tip; legs dull greyish flesh; iris carmine-red. Culmen 0·75, wing 3·5, tail 2·05, tarsus 1·1 inch. Female similar but duller in colour. The young bird lacks the blue colour, having the sides of the head warm ochreous brown, the chin and upper throat white, the lower throat and breast dull brownish ochreous, the middle of the abdomen white.

Hab. Central and Southern Europe up to about 54° N.; an irregular visitor to Britain; the whole of Africa and Madagascar; Asia Minor and Asia east to Persia.

Inhabits marshy and damp localities where the herbage is dense, as, like its allies, it is extremely secretive in its habits. It swims with ease and grace, and is well able to dive. It walks also with readiness and celerity on the floating herbage, but when flushed its flight is short. Its note is a low piping cry, resembling that of the Little Crake, and its food consists of insects, larvæ, and small molluscs. It breeds in May, its nest being carefully hidden in the herbage in some swampy locality, and is cup-shaped, well lined with dry grass and the leaves of aquatic plants. The eggs, usually 7 to 8 in number, are olivaceous ochreous very closely dotted and marbled with olivaceous brown, and measure about 1·7 by 0·81.

988. SUBSP. PORZANA PUSILLA.

Porzana pusilla (Pall.), Reis. Ross. Reichs. iii. Anh. p. 700 (1776); (Seebohm), B. Jap. Emp. p. 356; Sharpe, Cat. B. Br. Mus. xxiii. p. 106; Blanf. F. Brit. Ind. Birds, iv. p. 165; Tacz. F. O. Sib. O. p. 997; *P. pygmæa*, David and Oust. Ois. Chine, p. 487 (nec. Brehm).

Hailli, Nepal.; *Hime-kuina*, Jap.

Ad. (India). Differs from *P. bailloni* in being somewhat paler grey, and in having an ochreous brown streak from the lores through the eye and ear-coverts to the side of the neck, whereas in the European bird the sides of the head are grey without any such stripe. Gape 0·7, wing 3·5, tail 1·75, tarsus 1·1 inch.

Hab. South-east Siberia, Mongolia, Manchuria, Corea, Japan, China, Burma, India, and Ceylon; west to Afghanistan and Baluchistan, south to the Philippines in winter.

In habits and nidification it does not differ from the European bird. It breeds in South-east Siberia, Japan, and the Lower Himalaya—in the last locality in June and July, and in Japan and South-east Siberia in June.

989. LITTLE CRAKE.

PORZANA PARVA.

Porzana parva (Scop.), Ann. i. Hist. Nat. p. 108 (1769); Dresser, vii. p. 283, pl. 498; (Sharpe), Cat. B. Br. Mus. xxiii. p. 89; Blanf. F. Brit. Ind. Birds, iv. p. 164; Saunders, p. 511; *P. minuta* (Mont.), Orn. Dict. Suppl. fol. 9 (1813 nec. Pall.); Gould, B. of Gt. Brit. iv. pl. 90; *P. pusilla* (Bechst.), Orn. Taschenb. ii. p. 340 (1803 nec. Pall.); (Naum.), ix. p. 547, Taf. 238; (Gould), B. of. E. iv. pl. 345; (Lilford), iv. p. 134, pls. 57, 58.

Poule d'eau poussin, French; *Schiribilla*, Ital.; *Kleine Sumpfhuhn*, German; *Dverg Sumphöne*, Dan.; *Lilla Sumphöna*, Swed.

♂ *ad.* (Hungary). Differs from *P. bailloni* in being larger, the upper parts more olivaceous and less spotted, the wing-coverts unspotted, the black markings more blurred; first primary dark brown on both webs; under parts deep slate-blue, but the lower abdomen and under tail-coverts less distinctly barred; bill bright red at base, otherwise yellowish green; iris blood-red; legs green. Culmen 0·75, wing 4·15, tail 2·3, tarsus 1·3, middle toe with claw 1·75 inch. The female differs from the male in having the chin, lower cheeks, and throat white, the sides of the head only greyish slate-blue; lower throat, breast, and abdomen pinkish buff, the lower abdomen and under tail-coverts as in the male but paler.

Hab. Central and Southern Europe, but of irregular occurrence as far north as Great Britain and Southern Scandinavia; winters in North Africa; South-west and Central Asia east to North-west India.

In its habits it is shy and secretive like its ally Baillon's Crake, frequenting similar localities. Its call-note is a tolerably loud *kik, kik, kik.* Its nesting habits are similar to those of Baillon's Crake, but the nest is larger and of coarser materials; the eggs, which are deposited late in May or in June, are rather larger and paler, the ground-colour more ochreous and the surface spots more scattered. In size they measure about 1·18 by 0·87.

990. BUTTON CRAKE.

PORZANA EXQUISITA.

Porzana exquisita, Swinhoe, Ann. and Mag. Nat. Hist. (4) xii. p. 376 (1873); id. Ibis, 1875, p. 135, pl. iii.; Sharpe, Cat. B. Br. Mus. xxiii. p. 128; *P. undulata*, Tacz. J. f. O. 1874, p. 333; id. F. O. Sib. O. p. 999; Seebohm, B. Jap. Emp. p. 358.

Shima-kuina, Jap.

♂ *ad.* (Japan). Upper parts, wings, and tail rufescent olivaceous, blotched with black and marked with white, the first quill white on the outer web, the secondaries white on the apical two-thirds; throat, breast, and abdomen white, the lower neck, fore throat, sides of neck and flanks reddish brown with an olivaceous tinge, barred with blackish and margined with white; bill deep brown, but greenish yellow at base of lower mandible and on rectus; legs and feet light flesh-brown, dark on joints and claws; iris brown. Culmen 0·55, wing 3·0, tail 1·05, tarsus 0·8, middle toe and claw 0·95. The male is smaller, has less white on the wings, and the under parts are less mottled.

Hab. Darasun in Dauria, the Ussuri country, Japan, and North-eastern China.

Is most nearly allied to *P. noveboracensis* (Gm.) of North America, but is smaller and darker. Like its allies it is shy and secretive, hard to flush, and flies awkwardly. It frequents damp, swampy localities, and nests on the ground, making a nest of leaves of aquatic plants. The eggs are yellowish white, marked with a few greyish shell-spots, and with reddish brown surface-markings, which are more numerous on the basal portion; in size they measure about 1·04 by 0·79.

991. Ruddy Crake.

PORZANA FUSCA.

Porzana fusca (Linn.), Syst. Nat. i. p. 262 (1766); (Sharpe), Cat. B. Br. Mus. xxiii. p. 146; (Blanf.), F. Brit. Ind. Birds, iv. p. 170; (Seebohm), B. Jap. Emp. p. 357; *P. erythrothorax* (Temm. and Schleg.), Faun. Jap. Aves, p. 121, pl. 78 (1850); David and Oust. Ois. Chine, p. 486.

Hi-kuina, Jap.

♂ *ad.* (Japan). Upper parts dark brownish olive, browner on the rump, upper tail-coverts, and inner secondaries; quills and tail dark brown; forehead, sides of head, neck, and under parts vinous chestnut; flanks and abdomen olivaceous brown, the abdomen and lower flanks streaked with white; under tail-coverts blackish margined with white; bill greenish brown; legs red; iris crimson; eyelids plumbeous, the edges red. Culmen 0·9, wing 4·0, tail 2·0, tarsus 1·3 inch. Sexes alike, but the young bird is dusky olivaceous, the chin, throat, and middle of abdomen whitish.

Hab. India, Ceylon, Burma, China, and Japan, south in winter to the Malay Peninsula, Java, and the Philippines.

Frequents damp, rush-covered places and ponds, and feeds on insects and seeds. It swims like a Moorhen and has a soft call. It breeds in India from July to September, and in Japan from early in June to the middle of August, and places its nest, which is constructed of rushes and weeds, amongst the rushes, grass, or wild rice, very little above the surface of the water. The eggs, from 4 to 6 in number, are pinky or creamy white, streaked, spotted, and blotched with reddish brown surface markings and inky purple shell blotches which are more dense at the larger end. In size they measure about 1·2 by 0·84.

992. Siberian Ruddy Crake.

PORZANA PAYKULLI.

Porzana paykulli (Ljungh), Kungl. Vet. Akad. Handl. 1813, p. 259, tab. v.; (Sharpe), Cat. B. Br. Mus. xxiii. p. 149; *P. mandarina*, Swinhoe, Ann. and Mag. Nat. Hist. 4th Series, v. p. 173 (1870); (David and Oust.), Ois. Chine, p. 488, pl. 123; (Tacz.), F. O. Sib. O. p. 995; *P. erythrothorax* (nec. T. and S.); (Radde), Sib. Reise, ii. p. 309 (1863).

♂ *ad.* (China). Differs from *P. fusca* in having the flanks and thighs white barred with dusky blackish, the under tail-coverts black barred and tipped with white, and the axillaries and under wing-coverts white barred with blackish; bill bluish grey, blackish on the culmen and about the tip, pea-green about the base; inside of mouth flesh-colour; iris crimson; eyelid red; legs and toes salmon-colour, brownish on the under surface of the tarsi, on the toes, and on the soles. Culmen 1·1, wing 4·7, tail 2·15, tarsus 1·5 inch.

Hab. Eastern Siberia, the Amoor, the Bay of Abrek on the coast of the Sea of Japan, and Sidemi; Corea, China, the Malay Peninsula, Java, and Borneo.

I find but little on record respecting the habits of this species, which do not appear to differ from those of its congeners. M. Kalinosowski found it breeding at Sidemi on a damp plain, and describes its eggs as closely resembling those of *Crex pratensis* in colour and markings, and in size measuring about 35·3 by 26·2 mm. (1·39 by 1·02 inch).

CREX, Bechstein, 1803.

993. Corn-Crake or Land-Rail.

CREX PRATENSIS.

Crex pratensis, Bechst. Orn. Taschenb. part 2, p. 337 (1803); Naum. ix. p. 496, Taf. 236; Hewitson, ii. p. 372, pl. cv. fig. 2; Gould, B. of Gt. Brit. iv. pl. 87; Dresser, vii. p. 291, pl. 499; Saunders, p. 507; Lilford, iv. p. 126, pl. 55; *Rallus crex*, Linn. Syst. Nat. i. p. 261 (1766); (Gould), B. of. E. iv. pl. 341; (Ridgway), p. 140; (Sharpe), Cat. B. Br. Mus. xxiii. p. 82; Blanf. F. Brit. Ind. Birds, iv. p. 163.

Râle des prés, French; *Codornizão*, Portug.; *Polla de agua*, *Rey de las codornices*, Span.; *Re di quaglie*, Ital.; *Wiesenralle*, German; *Kvartelkoning*, Dutch; *Vagtelkonge*, Dan.; *Agerrixe*, Norweg.; *Ängsknarr*, Swed.; *Ruisrääkkä*, Finn.; *Korostell*, Russ.

♂ *ad.* (England). Crown, hind neck, and upper parts blackish brown marked with greyish and reddish ochreous; quills rufous brown; wing-coverts rusty red; chin white; sides of head blue-grey with a pale brown band passing through the eye to the neck; sides of neck greyish ochreous marked with reddish brown; abdomen and under tail-coverts white, the latter marked with reddish brown; flanks rufous barred with white; bill dark brown; legs greyish flesh; iris clear brown. Culmen 0·8, wing 5·5, tail 2·15, tarsus 1·5 inch. Female similar but duller. In the autumn the spots on the upper parts are smaller, the under parts paler, and the flanks less rufous.

Hab. Europe generally, including even the outlying Hebrides, nearly up to the Arctic Circle; Africa, south to the Cape Colony in winter; Asia, east to the Yenesei and possibly to the Lena, south through Persia to Muscat; of doubtful occurrence in Northern India; has strayed to Greenland, Bermuda, and the east coast of North America.

Frequents fields, meadows, and lowlands, and though seldom seen, its harsh grating note is often heard. It runs with ease and celerity, but is averse to take wing. It feeds chiefly on insects of various kinds. Its nest is a mere depression in the soil, usually in a cornfield or meadow, and is very scantily lined with grass-bents, and its eggs, 8 to 12 in number, are usually deposited in June, and are like those of *R. aquaticus*, but paler in ground-colour and more profusely marked, and measure about 1·48 by 1·04.

PORPHYRIO, Briss., 1760.

994. Purple Gallinule.

PORPHYRIO CÆRULEUS.

Porphyrio cæruleus (Vandelli), Flor. and Faun. Lusit. etc. i. p. 37 (1797); Sharpe, Cat. B. Br. Mus. xxiii. p. 194; *P. hyacinthinus*, Temm. Man. d'Orn. ii. p. 698 (1820); Gould, B. of E. iv. pl. 340; *P. veterum*, Dresser, vii. p. 299, pl. 500 (nec. Gmel.); Lilford, iv. p. 146, pl. 62.

Camão, Portug.; *Gallo azul*, *Calamon*, Span.; *Pollo sultano*, Ital.; *Kazir*, Moor.

♂ *ad.* (Spain). Upper parts rich deep blue; quills on the inner webs and tail-feathers bluish black; sides of head, chin, throat, and upper breast rich turquoise-blue; rest of under parts blackish blue, except the under tail-coverts, which are white; frontal plate and bill bright sealing-wax red; legs flesh-red; iris lake-red. Gape 1·7, wing 9·5, tail 4·1, tarsus 3·5, middle toe with claw 4·8 inch. Sexes alike. The young bird has the upper parts bluish slate-grey, the rump slaty blackish, the sides of head dull ashy grey with a bluish tinge; chin and upper throat ashy white; rest of under parts dull bluish slate tipped with ashy grey, the middle of abdomen whiter, the under tail-coverts white.

Hab. South Portugal and Spain, rare in Southern France and Italy; Sardinia and Sicily; rarer further east, though found as far as Mesopotamia; North-west Africa.

In habits it somewhat resembles the Coot, and frequents similar localities, marshy places and the shores of lakes where the vegetation is dense, and is shy and secretive. It breeds late in March or in April, placing its nest, which resembles that of the Coot, amongst dense aquatic vegetation, and deposits 3 to 5 eggs, which are warm stone-ochreous in ground-colour, marked with violet-grey shell blotches, and deep brownish red surface spots, and measure about 2·8 by 1·43.

995. GREEN-BACKED GALLINULE.

PORPHYRIO MADAGASCARIENSIS.

Porphyrio madagascariensis (Lath.), Ind. Orn. Suppl. p. lxviii. (1801); *P. chloronotus*, Vieill. Nouv. Dict. xxviii. p. 24 (1819); Brehm. J. f. O. 1853, Extra-heft, p. 103; *Fulica porphyrio*, Linn. Syst. Nat. i. p. 258 (1766); (Sharpe), Cat. B. Br. Mus. xxiii. p. 195; *P. smaragnotus*, Temm. Man. d'Orn. ii. p. 700 (1820); Dresser, vii. p. 303, pl. 501.

Dikm, Digmeh, Arabic.

♂ *ad.* (Egypt). Differs from *P. cœruleus* in having the back rich dark bluish green instead of dark blue. Gape 1·7, wing 10·4, tail 4·35, tarsus 3·85, middle toe with claw 4·9 inch.

Hab. Egypt, and Africa south to the Cape, Madagascar; a very rare straggler to Southern France and Italy.

In habits it does not differ from *P. cœruleus.* It breeds in Africa, and is said to deposit 6 to 10 eggs, which are ruddy brown spotted with dark purple brown, and measure 2·2 by 1·6.

996. INDIAN GALLINULE.

PORPHYRIO POLIOCEPHALUS.

Porphyrio poliocephalus (Lath.), Ind. Orn. Suppl. p. lxviii. (1801); Dresser, ix. p. 333, pl. 706; Sharpe, Cat. B. Br. Mus. xxiii. p. 197; Blanf. F. Brit. Ind. Birds, iv. p. 178; *P. veterum*, S. G. Gmel. Reise Russ. iii. pl. xxi. p. 79, footnote, pl. 12 (1774); Radde, Orn. Cauc. p. 380, pl. xxiv. xxi. figs. 3, 4 (eggs).

Sultanka, Russ.; *Bojachana*, Tartar; *Keim, Kaima*, Hindu.

♂ *ad.* (India). Upper parts deep blue, the wings slightly washed with greenish; tail black, externally washed with blue; crown ashy blue; sides of head ashy; neck tinged with ashy grey; under parts deep blue, the breast tinged with greenish; flanks bright blue; under tail-coverts white; bill and frontal shield dark red; legs and feet red, the joints of the knees and toes blackish brown; iris red. Culmen with frontal shield 2·85, wing 11·0, tail 4·25, tarsus 4·05 inch.

Hab. The shores of the Caspian, east to India, Ceylon, Burma, and Tenasserim.

In habits it does not differ from *P. cæruleus*, and its nest is also similar. In India it breeds from July to September, depositing 6 to 8, and sometimes as many as 10 eggs, which resemble those of *P. cæruleus*, but are rather smaller, paler, have fewer and smaller markings, and average 1·93 by 1·39.

997. ALLEN'S GALLINULE.

PORPHYRIO ALLENI.

Porphyrio alleni, T. R. H. Thompson, Ann. and Mag. Nat. Hist. x. p. 204 (1842); Dresser, vii. p. 307, pl. 502; Sharpe, Cat. B. Br. Mus. xxiii. p. 187.

Canbonja-angaṅga, in West Africa.

♂ *ad.* (Africa). Crown, nape, and sides of head black tinged with indigo-blue; hind neck and upper parts deep olivaceous glossed with parrot-green; quills and tail bluish black; wing-coverts cobalt-blue tinged with green; under parts deep blue, becoming blackish on the lower abdomen and thighs; under tail-coverts, except the lowest layer, white; bill dark red; frontal shield dusky; tarsi and feet crimson; iris reddish brown. Culmen, with frontal shield, 1·85, wing 6·1, tail 2·6, tarsus 2·1 inch.

Female similar. The young bird has the head and hind neck rufescent sandy brown, the sides of the head paler; upper parts umber-brown margined with clay-ochreous, the rump tinged with greenish blue; chin, upper throat, and middle of breast and abdomen white; lower throat, sides of neck, breast, and flanks warm ochreous clay, the under tail-coverts more rufous; thighs chiefly bluish black; bill and frontal plate reddish horn; legs pale reddish brown; iris light brown.

Hab. Africa generally; Madagascar, and a straggler to the island of Rodriguez; of rare and accidental occurrence in Italy and Spain; and also, it is said, in Madeira and the Canaries.

In habits it is said to resemble *Gallinula chloropus.* It inhabits dense reed and papyrus thickets, and is shy and secretive. Its call-note is described as harsh, and is generally heard in the morning and evening. It feeds on aquatic plants, seeds, worms, and insects. So far as I can ascertain, nothing is on record as to its nidification, but an egg in the British Museum, extracted from the body of a bird shot on the Ruo river, British Central Africa, is pinkish cream-colour, marked, more thickly at the larger end, with underlying pale purple and reddish brown overlying surface specks, spots, and small blotches, and measures 1·4 by 1·05.

GALLINULA, Briss., 1766.

998. MOORHEN.

GALLINULA CHLOROPUS.

Gallinula chloropus (Linn.), Syst. Nat. i. p. 258 (1766); Naum. ix. p. 587, Taf. 240; Gould, B. of E. iv. pl. 342; id. B. of Gt. Brit. iv. pl. 85; Dresser, vii. p. 313, pl. 503; Hewitson, ii. p. 378, pl. cvii. fig. 1; Sharpe, Cat. B. Br. Mus. xxiii. p. 169; Tacz. F. O. Sib. O. p. 1000; Blanf. F. Brit. Ind. Birds, iv. p. 175; Saunders, p. 517; Lilford, iv. p. 141, pl. 61.

Poule d'eau, French; *Gallinha de agua,* Portug.; *Polla de agua,* Span.; *Gallinella d'acqua,* Ital.; *Wasserhuhn,* German; *Waterhoentje,* Dutch; *Grönbenet-Rörhöna,* Dan.; *Grönbenet-Vandhöne,* Norweg.; *Rörhöna,* Swed.; *Liejukana,* Finn.; *Balotnaja-Kuritza,* Russ.; *Jal-Murghi,* Hindu.; *Ban,* Jap.

♂ *ad.* (England). Head, neck, and fore back deep greyish slate-blue; under parts paler and greyer; upper parts deep olivaceous brown; quills and tail dark brown; edge of wing and margin of first quill white; flanks marked with long white stripes; lower abdomen greyish white; under tail-coverts white with a median black tuft; base of bill and frontal plate bright red, the front of bill yellow; legs dull green with a red garter; iris red. Culmen 1·34, wing 6·5, tail 2·85, tarsus 1·85 inch. Sexes alike.

Hab. Europe generally, north to Central Scandinavia, and has been obtained as far north as the North Cape; the whole of Africa; Asia, east to Japan, south throughout India and Ceylon, north to Lake Baikal.

Frequents ponds, river-banks, and marshes where the aquatic vegetation is dense, and where it can find good shelter. It swims and dives with ease, and on land runs swiftly. Its call note is a loud *kirrik crek rek rek,* most often to be heard in the evening. Its food consists of aquatic insects, worms, tender shoots, and seeds of aquatic plants, &c. The nest is placed amongst aquatic herbage, sometimes, though rarely, on a tree, and is a bulky structure of dried weeds and aquatic plants, lined with finer materials. The eggs, 6 to 9 or 10 in number, are rusty clay-yellow with violet-grey shell-markings and reddish brown surface spots and blotches, and measure about 1·63 by

1·21. Two or sometimes three broods are reared in the same season. In America our Moorhen is replaced by a closely allied form, *G. galeata* (Licht.).

FULICA, Linn., 1766.

999. THE COOT.

FULICA ATRA.

Fulica atra, Linn. Syst. Nat. i. p. 257 (1766); Naum. ix. p. 635, Taf. 241; Hewitson, ii. p. 380, pl. cvii. fig. 2; Gould, B. of E. iv. pl. 338; id. B. of Gt. Brit. iv. pl. 84; Dresser, vii. p. 327, pl. 504, fig. 2; David and Oust. Ois. Chine, p. 489; Sharpe, Cat. B. Br. Mus. xxiii. p. 210; Tacz. F. O. Sib. O. p. 1001; Blanf. F. Brit. Ind. Birds, iv. p. 180; Seebohm, B. Jap. Emp. p. 360; Saunders, p. 519; Lilford, iv. p. 147, pl. 63.

Foulque noire, French; *Galeirão*, Portug.; *Mancon, Focha*, Span.; *Folaga*, Ital.; *Blässhuhn*, German; *Meerkoet*, Dutch; *Blishöne*, Norweg. and Dan.; *Sothöna*, Swed.; *Nokikana*, Finn.; *Lisa, Lisucha*, Russ.; *Kaschkalda*, Tartar; *Ghorra*, Arab.; *El Ghor*, Moor.; *Dasari*, Hindu.; *Ō-ban*, Jap.

♂ *ad.* (England). Head, neck, crissum, and under tail-coverts black, the two first slightly washed with slate; upper parts dark slaty blackish, the edge of the wing and tips of short secondaries white; under parts slaty blue-grey; bill and frontal plate bluish white; legs bluish grey, the bare part of the tibia orange; iris deep red. Culmen, with frontal plate, 2·05, gape 1·45, wing 8·2, tail 2·2, tarsus 2·25, middle toe with claw, 3·55 inch. Sexes similar.

Hab. Europe generally, becoming rarer in Northern Scandinavia; Azores, Madeira, Canaries; Egypt and North Africa; Asia Minor, and Asia east to Japan; north to Tarei-nor in Siberia; N.E. Kan-su, Mongolia, Manchuria; in winter south to the Philippines.

In the extreme northern portion of its range it is migratory, but chiefly resident in Britain and the south. It frequents marshes, ponds, and lakes where the aquatic herbage is dense and affords ample shelter. On land it runs with ease, on the water swims excellently, and dives well. It is very gregarious, but shy and wary. It takes wing heavily, but flies well when once aloft. Its food consists of seeds, buds, and tender shoots of aquatic plants, insects, small shell-fish, &c., and it feeds both in the day and at night. Its call-note is a clear, loud, almost trumpet-like cry uttered abruptly. Its nest is a large, close structure of reeds, flags, &c., lined with finer materials, and is generally placed amongst reeds or willows, and often in shallow water. The eggs, 7 to 8, sometimes as many as 12, in number, are usually deposited in May, and are yellowish grey or stone-ochreous, dotted and marked with brownish black, and measure about 2·08 by 1·48.

In America our Coot is replaced by *F. americana*, which has the lateral under tail-coverts white.

1000. CRESTED COOT.

FULICA CRISTATA.

Fulica cristata, Gmel. Syst. Nat. i. p. 704 (1788); Layard, B. of S. Afr. p. 343; Dresser, vii. p. 323, pl. 504, fig. 1; Sharpe, Cat. B. Br. Mus. xxiii. p. 215; *F. mitrata*, Licht. Verz. Vög. Kaffernland, p. 19 (1842).

Galeirão, Portug.; *Mancon, Focha de cuernets*, Span.; *Folaga africana*, Ital.

♂ *ad.* (Spain). Differs from *F. atra* in lacking all white on the secondaries, and in having two conspicuous red knobs at the base of the frontal shield; bill and frontal shield bluish white; legs and feet greenish brown; iris blackish. Gape 1·4, wing 8·4, tail 2·5, tarsus 2·65 inch. Female similar but somewhat smaller, with the frontal knobs less developed.

Hab. The whole of Africa to Cape Colony; Southern Portugal and Spain, and the Balearic Isles, where it breeds; of rare occurrence in the south of France and Italy, but tolerably common in Sardinia.

Is said to resemble *G. chloropus* more than *F. atra*, both in its general habits and choice of locality. It is shy and wary, and trusts more to hiding and diving than to its wings for safety. Its nest and eggs resemble those of *F. atra*, but the latter are often darker than those of that species. In Southern Europe it breeds in May, but in South Africa in December.

GRUS, Pall., 1767.

1001. COMMON CRANE.

GRUS COMMUNIS.

Grus communis, Bechst. Naturg. Deutschl. iii. p. 60 (1793); Dresser, vii. p. 337, pl. 505; Tegetmeier and Blyth, Nat. Hist. Cranes, p. 59; Blanf. F. Brit. Ind. Birds, iv. p. 186; Blaauw, Monogr. Cranes, p. 1, part i. and xvii. fig. 1 (egg); Saunders, p. 521; Lilford, iv. p. 151, pl. 64; *G. cinerea*, Bechst. Naturg. Deutschl. iv. p. 103, tab. xix.

(1809); Naum. ix. p. 345, Taf. 231; Gould, B. of E. iv. pl. 270; id. B. of Gt. Brit. iv. pl. 19; Hewitson, ii. p. 308, pl. lxxxi.; Tacz. F. O. Sib. O. p. 796; *Ardea grus*, Linn. Syst. Nat. i. p. 234 (1766); (Sharpe), Cat. B. Br. Mus. xxiii. p. 250; *G. lilfordi*, Sharpe, tom. cit. p. 252.

La Grue, French; *Grou*, Portug.; *Grulla*, Span.; *Kranich*, German; *Kraan*, Dutch; *Trane*, Dan. and Norweg.; *Trana*, Swed.; *Kuorga*, Lapp.; *Kurki*, Finn.; *Jouravl-sieryi*, Russ.; *Rhernong*, Arab.; *Kúrúnch*, Hindu.

♂ *ad.* (N. Russia). Crown and lores nearly naked, the skin blackish with a broad band of red across the occiput and more or less covered with black hair; upper nape greyish black, below which the hind neck is white extending up to the eye, and a narrow white streak from the base of each mandible; throat and upper neck slaty blackish; lower neck, upper and under parts ashy grey; primaries black; secondaries elongated, lax, conspicuously tipped or with the outer web black; tail grey with the terminal portion blackish; bill greenish brown, paler at the base, dull flesh-coloured at the base below; legs blackish grey; iris reddish. Culmen 4·7, wing 24·0, tail 8·1, tarsus 9·6 inch. Sexes alike.

Hab. Europe, breeding as far north as Lapland and as far south as Spain; formerly an inhabitant of England, but now of rare and accidental occurrence; Asia, east to Japan, north to Northern Siberia, and south in winter to India and China.

Frequents marshes and bogs covered here and there with bushes, and is shy and wary in its general habits. Its note is a loud clear trumpet-like sound. It feeds on various vegetable substances, such as shoots, roots, grain, where obtainable, berries, &c., and insects, small reptiles, and even small mammals. Its nest is usually rather a scanty, simple structure, and is placed on the ground, and the eggs, 2 in number, are usually deposited from the middle of May to the middle of June, and vary from light olive-grey to olive-brown more or less streaked and blotched with pale brown shell spots and reddish brown surface markings, and measure about 3·61 by 2·46.

1002. BLACK-NECKED CRANE.

GRUS NIGRICOLLIS.

Grus nigricollis, Prjev. Mongol. i Strana Tangut. ii. p. 135, tab. xix. (1876); Tegetm. and Blyth, Nat. Hist. Cranes, p. 70, pl. 1 (1881); Sharpe, Cat. B. Br. Mus. xxiii. p. 258; Blaauw, Monogr. Cranes, p. 8, pl. ii.

♂ *ad.* General colour pale ashy grey, nearly white; crown naked, rough, red in colour, sparsely covered with a few small hairs; head and upper neck smoky black; a small white spot behind each eye; primaries and secondaries, spurious wing, and tail black; inner secondaries falcated, elongated, slightly decomposed and erectable; bill greenish horn; legs black; iris yellow. Culmen 4·8, wing 25·3, tail 9·3, tarsus 10·2 inch.

Hab. Koko-nor and Tibet.

I find nothing on record respecting the habits or nidification of this species, except that its cry is said to resemble that of *A. leucogeranus,* and that it is supposed to breed in the Koko-nor district.

1003. Manchurian Crane.

GRUS JAPONENSIS.

Grus japonensis (P. L. S. Müller), Natursystem, Suppl. p. 110 (1776); Seebohm, B. Jap. Emp. p. 351; Sharpe, Cat. B. Br. Mus. xxiii. p. 258; Blaauw, Monogr. Cranes, p. 11, pl. 3 and pl. xvii. fig. 2 (egg); *G. viridirostris,* Vieill. Encycl. Méth. iii. p. 1141 (1823); Tegetm. and Blyth, Nat. Hist. Cranes, p. 53; David and Oust. Ois. Chine, p. 435; Tacz. F. O. Sib. O. p. 806; *G. montignesia,* Bp. Compt. Rend. xxxvii. p. 661 (1854); Sclater, in Wolf's Zool. Sketches, ii. pl. 46.

Tancho, Jap.

♀ *ad.* (Japan). General colour pure white; crown bare, papillose crimson; cheeks, throat, and hind neck slate-grey; region over and below the eye and a band from the occiput down the hind neck pure white; secondaries black; legs greyish black; bill greenish horn; iris dark brown. Culmen 6·3, wing 25·0, tail 9·0, tarsus 10·2 inch.

Hab. South-eastern Siberia, Manchuria, Japan, Corea, and Northern China, but of rare occurrence south of the Great Wall.

Is said to frequent the large open plains, and is a migrant in S.E. Siberia, arriving in the Ussuri country early in April and leaving in November. It breeds in the large marshy plains which are interspersed with small lakes, making a simple nest on the ground, and deposits 2 eggs, which are isabelline yellow in colour, marked with pale reddish grey shell blotches and light olivaceous brown surface markings, and measure about 4·05 by 2·53.

1004. Hooded Crane.

GRUS MONACHUS.

Grus monachus, Temm. Pl. Col. v. pl. 555 (1835); id. and Schleg. Faun. Jap. p. 119, pl. 75; David and Oust. Ois. Chine, p. 434; Tegetm. and Blyth, Nat. Hist. Cranes, p. 71; Sharpe, Cat. B. Br. Mus. xxiii. p. 257; Blaauw, Monogr. Cranes, p. 15, pl. iv.

Nabe-dzuru, Jap.

Ad. (Japan). Upper and under parts slaty grey, the former with brownish, and the latter with greyish margins to the feathers; primaries, primary coverts, secondaries, tail, and tail-coverts slaty black; head and most of the neck pure white; forehead covered with black hair-like bristles; fore crown bare, papillose, red; bill and upper eyelids yellowish horn; legs blackish horn; iris orange-brown. Culmen 4·5, wing 21·0, tail 7·0, tarsus 8·5 inch.

Hab. Eastern Siberia, Mongolia, Manchuria, wintering in China, Corea, and occasionally in Japan.

In general habits it does not differ from its allies. It breeds probably north of Dauria, but its nest and eggs are as yet unknown.

1005. Canadian Crane.

GRUS CANADENSIS.

Grus canadensis (Linn.), Syst. Nat. i. p. 234 (1766); Ridgway, p. 135; Sharpe, Cat. B. Br. Mus. xxiii. p. 256; Blaauw, Monogr. Cranes, p. 20, pl. vi.; *G. fraterculus*, Cass. in Baird Cass. and Lawr. B. N. Am. p. 656 (1858); Tegetm. and Blyth, Nat. Hist. Cranes, p. 78; Tacz. F. O. Sib. O. p. 800; *G. mexicana* (P. L. S. Müller), Natursyst. Suppl. p. 110 (1776); Ridgway, p. 135; Sharpe, Cat. B. Br. Mus. xxiii. p. 254.

♂ *ad.* (N. America). Crown and lores bare, reddish, more or less covered with blackish hairs; general colour slate-grey or plumbeous grey, sometimes tinged with rusty brownish; primaries darker; cheeks and throat whitish; bill blackish, paler at tip; legs and feet blackish; iris crimson. Culmen 4·4, wing 18·5, tail 7·7, tarsus 8·0. Sexes alike.

Hab. North America, from Alaska and Hudson's Bay, south to Mexico, Florida, and Georgia in winter.

Obtained twice in North-eastern Siberia on the promontory of Chukotsköi Noss, one of the specimens being in the Warsaw Museum. *Grus australasiana*, Gould, which inhabits Eastern Australia has also, according to Taczanowski (F. O. Sib. O. 801), been once obtained near Yakutsk.

1006. Sarus Crane.

GRUS COLLARIS.

Grus collaris, Bodd. Tabl. Pl. enl. p. 52 (1783); (Sharpe), Cat. B. Br. Mus. xxiii. p. 262; Blaauw, Monogr. Cranes, p. 25, pls. vii. vii.*a*; *G. antigone* (nec. Linn.), Tegetm. and Blyth, Nat. Hist. Cranes, p. 47; Radde, Orn. Cauc. p. 391; Dresser, ix. p. 337, pl. 707.

♂ *ad.* (India). General colour bluish grey; head and upper neck bare, papillose, red; the throat, sides, and hind neck covered with black hairs, a patch of ash-grey feathers covering the ears; a ring round the neck below the bare portion, and the ends of the elongated inner secondaries, white; quills blackish brown; bill pale greenish horn, darker at the tip; legs reddish flesh; iris orange. Culmen 7·1, wing 26·5, tail 9·6, tarsus 11·4 inch. Sexes alike.

Hab. India, straggling west to Astrachan, Gurieff, and the Caspian.

In habits this crane does not differ from its congeners, but not being molested is less shy. It frequents similar localities, and makes a large nest of reeds, rushes, &c., and breeds in India from July to November, depositing 2 eggs, which are dull white or creamy buff, more or less marked with purplish grey shell-markings and brown surface spots and blotches, and measure about 3·96 by 2·56.

1007. Demoiselle Crane.

GRUS VIRGO.

Grus virgo (Linn.), Syst. Nat. i. p. 234 (1766); Naum. ix. p. 386, Taf. 232; Dresser, vii. p. 353, pl. 506; Tegetmeier and Blyth, Nat. Hist. Cranes, p. 26; David and Oust. Ois. Chine, p. 436; (Sharpe), Cat. B. Br. Mus. xxiii. p. 269; (Blanf.), F. Brit. Ind. Birds, iv. p. 190; (Tacz.), F. O. Sib. O. p. 810; Lilford, iv. p. 153, pl. 65; (Blaauw), Monogr. Cranes, p. 35, pls. x. x.*a*, and xviii. fig. 1 (egg).

Demoiselle de Numidie, French; *Grulla moruna*, Span.; *Damigella di Numidia*, Ital.; *Jungfernkranich*, German; *Malöi-Juravl*, *Stepnoi-Juravl*, Russ.; *Karkarra*, Hindu.

♂ *ad.* (S.E. Europe). Crown, nape, a line down the hind neck, upper parts, lower breast, and under parts ashy blue-grey; forehead, sides of head, throat, and neck deep black; feathers on the upper breast black, elongated, pointed; from behind the eye on each side a full white tuft of feathers 4 to 5 inches long; quills black, the inner short secondaries tinged with grey, the innermost ones blue-grey, long, pointed, tipped with blackish; legs black; bill olivaceous brown, reddish towards the point; iris deep red. Culmen 2·8, wing 19·2, tail 7·0, tarsus 7·5 inch. Female similar but rather duller, the white tufts on the sides of the head smaller.

Hab. Southern Europe, chiefly in the east, has strayed once to Orkney and Heligoland, and twice to Sweden; Africa in winter as far south as Natal; Asia Minor, Central Asia, Mongolia, Dauria, and Northern China, wintering in India.

Frequents large open plains, generally not far from water, which it can visit during the heat of the day. In habits it resembles *G. communis,* but is remarkable from its peculiar saltatory exercises in which it indulges in the spring. It feeds on grain, insects, worms, and even reptiles, and its note is a loud trumpet-like call. In the autumn and winter it often collects in large flocks. It breeds in May or June, not making any regular nest, but scratches a hole in the soil, round which it often collects small stones, and deposits 2 eggs, which resemble those of *G. communis,* but are as a rule darker and more clearly marked, and also smaller, measuring about 3·31 by 2·11.

1008. WHITE-NECKED CRANE.

GRUS VIPIO.

Grus vipio, Pall. Zoog. Ross. As. ii. p. 111; David and Oust. Ois. Chine, p. 435; *G. leucauchen,* Temm. Pl. Col. v. pl. 449 (1838); Tegetm. and Blyth, Nat. Hist. Cranes, p. 35; Tacz. F. O. Sib. O. p. 804; Seebohm, B. Jap. Emp. p. 352; (Sharpe), Cat. B. Br. Mus. xxiii. p. 266; (Blaauw), Monogr. Cranes, p. 49, pl. xiii. and pl. xviii. fig. 4 (egg)?

Tan-cho, Jap.

ad. (Japan). Upper and under parts slaty grey, the latter darker; wing-coverts paler, the greater ones white at the ends; secondaries white at the base, otherwise black, the inner ones white, falcated and elongated; tail dark grey; forehead, orbital and aural regions bare, red, and covered with black hairs; entire hind neck, sides of the upper neck and throat pure white; bill greenish; legs bluish pink; iris brownish yellow. Culmen 6·50, wing 24, tail 8·0, tarsus 11·0 inch. Sexes alike.

Hab. Eastern Siberia, Mongolia, Manchuria, Corea, Japan, North-eastern China in winter.

In its general habits it is said to resemble *G. virgo,* and like that species indulges in peculiar saltatory exercises in the spring. It frequents open places, both dry and marshy, and is as a rule very shy and wary. Its nest is situated on a dry patch in the marshes, and its 2 eggs bear a considerable resemblance to those of *G. communis*, but are larger, measuring about 3·95 by 2·62.

1009. SIBERIAN CRANE.

GRUS LEUCOGERANUS.

Grus leucogeranus, Pall. Reis. Russ. Reichs. ii. Anhang, p. 714, tab. F. (1773); Gould, B. of E. iv. pl. 271; Temm. and Schlegel, Faun. Jap. p. 118, pl. 73; David and Oust. Ois. Chine, p. 436; Dresser, vii. p. 359, pl. 507; Tegetm. and Blyth, Nat. Hist. Cranes, p. 38; Radde, Orn. Cauc. p. 391; Seebohm, B. Jap. Emp. p. 349; (Sharpe), Cat. B. Br. Mus. xxiii. p. 261; (Blaauw), Monogr. Cranes, p. 52, pl. xiv. and pl. xviii. fig. 5 (egg); Tacz. F. O. Sib. O. p. 809; Blanf. F. Brit. Ind. Birds, iv. p. 187.

Belöi-Jouravl, Sterkh, Russ.; *Kügolok*, Tartar.; *Káre-Khar*, Hindu.; *Shirat-dzuru, Sodeguro*, Jap.

♂ *ad.* (N.W. India). Entire plumage pure white except the primaries which are black; inner secondaries and scapulars elongated; fore part of head to behind the eye bare, with a few scattered hairs; bill umber-brown; the nasal membrane and basal part, and the bare part of the head red; legs pale dull reddish pink; iris bright pale yellow. Culmen 7·4, wing 23·4, tail 8·0, tarsus 10·9 inch. Female similar but rather smaller. Young birds have the head feathered, dingy brown, and the plumage tinged with buff.

Hab. Eastern Europe (rare), Mongolia, Manchuria, Eastern Siberia, Dauria, the Amoor and Ussuri country, Japan, Northern China; a winter visitant to N.W. India.

Frequents large open places and marshes, or localities where the water is shallow, and feeds on rush seeds, bulbs, corms, and even leaves of aquatic plants, being exclusively a vegetable eater. When not alarmed its note is a mere chirrup, and its alarm cry is very feeble as compared with that of other cranes, being a mere repetition of the syllables *Karekhur*. I do not find any particulars on record respecting its nidification, but it is said to breed in Mongolia, and Mr. Blaauw figures its egg.

OTIS, Linn., 1766.

1010. THE BUSTARD.

OTIS TARDA.

Otis tarda, Linn. Syst. Nat. i. p. 264 (1766); Naum. vii. p. 13, Taf. 167, 168; Hewitson, i. p. 285, pl. lxxiii. fig. 1; Gould, B. of E. iv. pl. 267; id. B. of Gt. Brit. iv. pl. 17; Dresser, vii. p. 369, pl. 508; Sharpe, Cat. B. Br. Mus. xxiii. p. 284; Blanf. F. Brit. Ind. Birds, iv. p. 193; Saunders, p. 523; Lilford, v. p. 1, pl. i.

Outarde barbue, French; *Batarda*, Portug.; *Abutarda*, Span.; *Otarda*, Ital.; *Grosstrappe*, German; *Stor-Trappe*, Dan.; *Stor-Trappe*, Swed.; *Dropha*, Russ.; *Dudak*, Tartar; *Houbara*, Arab.

♂ *ad.* (Spain). Head pale ashy grey; hind neck and upper parts yellowish red, the latter barred with black; tail at base and tip greyish white otherwise reddish, with a broad subterminal black band, the middle feathers with a central black band; quills greyish black, the secondaries chiefly white; larger median coverts and spurious wing greyish white; at the base of the mandible on each side a bunch of long bristles; throat and fore neck greyish white; lower neck and breast reddish chestnut, marked with black, below which is a pale ashy grey band; under parts white; bill dull plumbeous grey, blackish towards the tip; legs dirty earth-grey; iris dark brown. Culmen 2·5, wing 26·0, tail 11·0, tarsus 6·2 inch. The female is smaller, has the chin white, the head, neck, and upper breast pale French-grey, and the rufous pectoral band and whiskers are wanting.

Hab. Central and Southern Europe, now rare in Southern Sweden, formerly an inhabitant of England but now an occasional straggler; rare in North Africa, Asia Minor, and Central Asia, and has once occurred in North-west India.

Inhabits plains, in preference grass land and cultivated localities where the country is open. It is eminently wary and shy, flies with ease, and usually when alarmed seeks safety in flight. It feeds on vegetable matter of various kinds, and to some extent also on insects. The nest is a mere depression in the soil, and the eggs, which are usually deposited in May, 2 to 3 in number, are dull olive-brown or olive-green clouded with dark brown, sometimes almost uniform dull bluish, and measure about 3·22 by 2·12.

1011. SIBERIAN BUSTARD.

OTIS DYBOWSKII.

Otis dybowskii, Tacz. J. f. O. 1874, p. 331; Seebohm, B. Jap. Emp. p. 355; Sharpe, Cat. B. Br. Mus. xxiii. p. 286; Tacz. F. O. Sib. O. p. 790.

Toodok, Buriat; *No-gan*, Jap.; *Ti-pou*, Chinese.

♂ *ad.* Differs from *O. tarda* in being smaller, the black dorsal bands are sparser, the wing-coverts white, the bristles at the base of the bill more numerous and pure white, the front of the neck covered with a full mane of long, narrow, curled white feathers. Culmen 3·0, wing 25·19, tail 9·63, tarsus 5·52 inch. The young bird has fewer moustachial bristles and lacks the mane on the front of the neck.

Hab. Dauria, the Ussuri country; wintering in the north and middle of China, Manchuria, Corea, and Japan.

In habits it is said to resemble our European bird, and like that it frequents open plains. Its eggs, which also closely resemble those of *O. tarda*, are usually deposited in May or in June, in a depression scratched in the ground lined with dry grass, 4 being the usual number.

TETRAX, Leach, 1816.

1012. LITTLE BUSTARD.

TETRAX CAMPESTRIS.

Tetrax campestris, Leach, Syst. Cat. Mamm. &c. Brit. Mus. p. 28 (1816); *Otis tetrax*, Linn. Syst. Nat. i. p. 264 (1766); Naum. vii. p. 52, Taf. 169; Hewitson, i. p. 287, pl. lxxiii. fig. 2; Gould, B. of E. iv. pl. 269; id. B. of Gt. Brit. iv. pl. 18; Dresser, vii. p. 383, pl. 509; (Sharpe), Cat. B. Br. Mus. xxiii. p. 287; Blanford, F. Brit. Ind. Birds, iv. p. 193; Saunders, p. 525; Lilford, v. p. 5, pl. 2.

Canepétière, French; *Cizão*, Portug.; *Sison*, Span.; *Gallina-pratajola*, Ital.; *Zwergtrappe*, German; *Dvergtrappe*, Dan.; *Strepet*, Russ.; *Maesgaek*, Tartar; *Chota-ti lur*, Punjab.

♂ *ad.* (Spain). Crown sandy brown marked with black; sides of head and throat plumbeous, marked with black, this colour extending in a V-shape down the neck; below this a white collar, then glossy black all round lower neck and on fore breast, and then another white collar; upper parts sandy brown barred and blotched with black; primaries black, but white at base, the inner ones tipped with white; secondaries white, the inner ones like the back; larger wing-coverts white marked with black, the lesser like the back; middle tail-feathers like the back, the outermost white barred with black; under parts white; bill horn becoming black at tip, base of lower mandible yellowish; legs ochreous; iris reddish brown. Culmen 0·70, wing 9·50, tail 4·50, tarsus 2·20 inch. In the winter the sides of the head, neck and fore neck are streaked and mixed black and buff, the breast thin and throat white. The female in spring has the upper parts paler, the sides of the head and neck sandy brown striped with black, the chin and under parts white, the breast tinged with ochre and marked with black.

Hab. Central and Southern Europe, but as a straggler as far north as Sweden and Great Britain; North Africa; Asia Minor, and Central Asia, east to Afghanistan and N.W. India.

Like its larger ally this Bustard inhabits open plains, more especially where the soil is under cultivation, and is extremely wary and difficult of approach, but it is said to squat down to escape observation. It feeds on vegetable substances and insects. During the pairing season the male utters a harsh cry, *trec, trec,* which may be heard at a considerable distance. Its nest is a mere depression in the soil, and the number of eggs, so far as my experience goes, is 3 to 4, but Mr. Aksakoff states that as many as 8 to 12 are deposited. These are usually laid in May, and vary from light greenish olive with indistinct brown blotches, to rich dark uniform olive brown, and are glossy in texture of shell; in size they average about 1·95 by 1·45.

Eupodotis arabs (Linn.), which inhabits Northern Africa, is said to occasionally occur just within the limits of the Palæarctic area but cannot well be included as a true Palæarctic species.

HOUBARA, Bp., 1831.

1013. HOUBARA BUSTARD.

HOUBARA UNDULATA.

Houbara undulata (Jacq.), Beitr. Gesch. Vög. p. 24, pl. 9 (1784); (Dresser), vii. p. 391, pl. 510; Sharpe, Cat. B. Br. Mus. xxiii. p. 320; *Otis houbara*, Desf. Mém. Acad. Roy. Sc. p. 496, pl. x. (1787); Gould, B. of E. iv. p. 268.

Houbara, Raad, Arabic; *Begunez,* Russ.

♂ *ad.* (N. Africa). Crown reddish ochreous marked with black; a full crest of long white feathers; chin white; sides of head and neck, fore neck and hind neck white vermiculated with blackish and tinged with pale ochreous brown; elongated ruff black on the sides, white in front of neck; upper parts rufescent ochreous boldly barred with black; the wing-coverts paler; primaries white at the base, otherwise black; tail rufescent ochreous with five bars of dove-blue, the terminal bars marked with black and tipped with white; under parts white; bill greyish brown, darker at the point, yellowish towards the base; legs greenish yellowish grey; iris greenish yellow. Culmen 1·8, wing 14·3, tail 8·5, tarsus 3·6 inch. The female is similar but with the crest and ruff less developed.

Hab. North Africa; Canaries; a rare straggler to Spain, Southern France, Italy, and Greece; Palestine; Armenia.

Inhabits open flat country, both the true desert and cultivated localities, and like its allies is extremely shy and wary. It feeds on vegetable matter, insects, caterpillars, &c., and even small reptiles. In North Africa it is highly esteemed as a quarry by falconers. Its nest is a mere depression in the soil, and the eggs, 4 to 5 in number, are deposited in May, and are olivaceous brown blurred with dashes of dark brown and here and there spotted with clear dark brown. In size they measure about 2·38 by 1·77, and are generally slightly pointed towards each end.

The Fuerteventuran bird has been separated as a subspecific form under the name *Otis undulata fuertaventuræ*, but I do not consider with sufficient reason.

1014. MACQUEEN'S BUSTARD.

HOUBARA MACQUEENI.

Houbara macqueeni (Gray and Hardw.), Ill. Ind. Zool. ii. pl. 47 (1834); (Naum.), xiii. p. 216, Taf. 170; (Gould), B. of As. vii. pl. 58; Newton, P.Z.S. 1861, pl. xxxix. fig. 5 (egg); (Dresser), vii. p. 395, pl. 511; Sharpe, Cat. B. Br. Mus. xxiii. p. 318; Blanf. F. Brit. Ind. Birds, iv. p. 196; Saunders, p. 527; Lilford, v. p. 10, pl. 3.

Tilúr, Punjabi; *Talúr*, Sindhi; *Hobára*, Persian.

♂ *ad.* (N.W. India). Differs from *H. undulata* in having the crest-feathers black on the terminal portion, the back finely vermiculated and blotched with black on a rufescent ochreous ground, the elongated pectoral feathers blue-grey, and not white, and the tail with only three bars; bill blackish above, paler below; legs and feet dull yellow; iris yellow. Culmen 1·7, wing 15·4, tail 8·6, tarsus 3·9 inch.

Hab. N.W. India; Afghanistan, Persia, Central Asia; a rare straggler to Europe, and has been met with in Germany, Poland, Finland, Öland, Belgium, Holland, and four times in Great Britain.

In habits and nidification this species does not differ from *H. undulata*, and its eggs closely resemble those of that species.

ŒDICNEMUS, Temm., 1815.

1015. STONE CURLEW.

ŒDICNEMUS SCOLOPAX.

Œdicnemus scolopax (S. G. Gmel.), Reise Russl. iii. p. 87, pl. 16 (1774); Dresser, vii. p. 401, pl. 512; Blanf. F. Brit. Ind. Birds, iv. p. 204; Saunders, p. 529; Lilford, v. p. 11, pl. 4; Poynting, i. p. 6, pl. 1; *C. œdicnemus*, Linn. Syst. Nat. i. p. 255 (1766); (Sharpe), Cat. B. Br. Mus. xxiv. p. 4; *Œ. crepitans*, Temm. Man. d'Orn. p. 332 (1815); Naum. vii. p. 92, Taf. 172; Gould, B. of E. iv. pl. 288; id. B. of Gt. Brit. iv. pl. 35; Hewitson, i. p. 288, pl. lxxiv.

Œdicnème criard, French; *Alcaravão*, Portug.; *Alcaraván*, Span.; *Occhione*, Ital.; *Triel*, *Dickfuss*, German; *Griel*, Dutch;

Triel, Dan.; *Tjockfot,* Swed.; *Avdotka, Läshin,* Russ.; *El Karuana,* Moor.; *Keruan,* Arab.; *Karwanak, Barsiri,* Hindu.

♂ *ad.* (England). Upper parts pale brown streaked with dark brown, the sides of the head paler; a light streak over the eye and a dark one from the base of the mandible to the ear-coverts; wings, when extended, with two distinct white bars; base of tail and middle feathers mottled pale and dark brown, tail then whitish tipped with black; under parts white, the breast, lower throat, and flanks washed with buff and streaked with blackish brown; under tail-coverts rufous buff; bill greenish yellow at base, blackish at point; legs pale yellow; iris golden yellow. Culmen 1·60, wing 9·5, tail 5·0, tarsus 3·0 inch. Sexes alike. The young bird resembles the adult, but the markings are less clearly defined.

Hab. Temperate and Southern Europe, a migrant in the northern portions of its range, but otherwise chiefly resident; Great Britain; rare in Ireland; accidental in Scandinavia; North Africa south to Abyssinia; Asia Minor and Asia east to India, Burma, and Ceylon, north into Central Asia.

Inhabits open, flat country, chiefly desert sandy places, and not, as a rule, cultivated ground; it is to some extent crepuscular, and feeds late into the night. In its general habits it reminds one much of the Bustards. Its cry is a loud and shrill *Curlew,* chiefly uttered at night. It feeds on worms, insects, larvæ, snails, &c. Its nest is hardly a depression on the soil in some dry place, and its eggs, 2 to 3 in number, are usually laid from early in April to the end of June, and are stone buff, sometimes with a greenish tinge, profusely spotted and blotched with blackish brown surface markings, and purplish grey or greyish brown shell blotches, and measure about 2·10 by 1·47. Sometimes two broods are reared in the season.

GLAREOLA, Briss., 1760.

1016. PRATINCOLE.

GLAREOLA PRATINCOLA.

Glareola pratincola (Linn.), Syst. Nat. i. p. 345 (1766); Gould, B. of Gt. Brit. iv. pl. 46; Dresser, vii. p. 411, pl. 513, fig. 1; Sharpe, Cat. B. Br. Mus. xxiv. p. 53; Blanf. F. Brit. Ind. Birds, iv. p. 216; Saunders, p. 531; Lilford, v. p. 15, pl. 5; Poynting, p. 7, pl. 2; *G. torquata,* Meyer, Taschenb. Deutsch. Vogelk. ii. p. 404 (1816); Naum. ix. p. 437, Taf. 234; Hewitson, ii. p. 290, pl. lxxv.; Gould, B. of E. iv. pl. 265.

Perdrix de mer, French; *Perdiz do mar*, Portug.; *Canastera*, Span.; *Pernice di mare*, Ital.; *Halsband-Giarol*, German; *Tirkuschka-lugovaya*, Russ.

♂ *ad.* (Spain). Upper parts dull earth-brown; nape, sides of head, and ear-coverts washed with rusty yellow; primaries blackish with a faint greenish gloss; secondaries broadly tipped with white; outer tail-feathers white on the outer web and on the base of inner web, otherwise blackish, the rest white on the basal, blackish on the terminal half; upper tail-coverts white; lores and a streak passing under the eye, round the throat, forming a shield, black, the innermost part yellowish buff; breast and flanks pale greyish brown; rest of under parts white; under wing-coverts and axillaries rich fox-red; bill black, the base of lower, and basal edge of upper mandible red; legs brownish black; iris dark brown. Culmen 0·7, wing 7·5, tail, deeply forked, 4·8, the middle feathers 2·3 shorter than the outer ones, tarsus 1·25 inch. Sexes alike. The young bird has the feathers on the upper parts with paler and white margins, the throat dirty yellowish and the breast striped and marked with blackish.

Hab. Southern Europe, occasionally straying as far north as Shetland; North Africa, moving in winter as far south as Natal; Asia Minor and Central Asia as far east as North-west India.

Inhabits open flat ground and desert places in the vicinity of pools or swamps, and is very Plover-like in its general habits. It feeds on insects of various kinds, chiefly coleoptera, which it both picks up from the ground, and captures on the wing. Its note is a shrill whistle, *kia, kia*, usually uttered on the wing. It makes no nest, but deposits in May its 2 to 4 eggs in a slight depression on the ground. These are oval, varying from ochreous yellow to pale slate, richly spotted and blotched with greyish brown underlying-, and blackish brown surface-markings, and measure about 1·22 by 0·96.

1017. SUBSP. GLAREOLA ORIENTALIS.

Glareola orientalis, Leach, Trans. Linn. Soc. xiii. p. 132, pl. xiii. (1820); Gould, B. of Austral. vi. pl. 23; David and Oust. Ois. Chine, p. 431; Sharpe, Cat. B. Br. Mus. xxiv. p. 58; Blanf. F. Brit. Ind. Birds, iv. p. 214; Tacz. F. O. Sib. O. p. 813.

♂ *ad.* (India). Differs from *G. pratincola* in having the tail less forked, the secondaries not white at the ends, the lores black, the chin and throat pale rufous, and the breast more rufous. Culmen 0·65, wing 7·25, tail 3·15, the middle feathers about an inch only shorter than the outer ones, tarsus 1·3 inch.

Hab. India, Ceylon, Burma, the Andamans and Nicobars; South-eastern Siberia, Mongolia, and China, south to the Malay Archipelago and North Australia.

In habits and nidification it does not differ from *G. pratincola*, and its eggs are undistinguishable from those of that species.

1018. NORDMANN'S PRATINCOLE.

GLAREOLA MELANOPTERA.

Glareola melanoptera, Nordm. Bull. Soc. Imp. Nat. Mosc. ii. p. 314 (1842); Gould, B. of As. vii. pl. 63; Dresser, vii. p. 419, pl. 513, fig. 2; Sharpe, Cat. B. Br. Mus. xxiv. p. 57; *G. nordmanni*, Fischer, Bull. Soc. Imp. Nat. Mosc. ii. p. 314, pl. 2 (1842).

Tirkuschka stepnaya, Russ.

♂ *ad.* (Red Sea). Differs from *G. pratincola* in having the upper parts, breast, and flanks rather darker, the secondaries not tipped with white, and the under wing-coverts and axillaries jet black. Culmen 0·75, wing 7·3, tail 4·3, tarsus 1·4 inch.

Hab. South-east Europe, in Russia north to about 56½° N. lat.; Africa south to Natal; Asia Minor and Asia east to the Altai Mountains.

In general habits and nidification it does not differ from *G. pratincola*, and its eggs resemble those of that species, but appear, as a rule, to have the ground-colour more ochreous in tinge and the markings are bolder.

CURSORIUS, Lath., 1790.

1019. CREAM-COLOURED COURSER.

CURSORIUS GALLICUS.

Cursorius gallicus (Gmel.), Syst. Nat. i. p. 692 (1788); Hewitson, Ibis, 1859, p. 79, pl. ii. fig. 3 (egg); Gould, B. of E. pl. 266; id. B. of Gt. Brit. iv. pl. 44; Dresser, vii. p. 425, pl. 514; Sharpe, Cat. B. Br. Mus. xxiv. p. 34; Blanf. F. Brit. Ind. Birds, iv. p. 211; Saunders, p. 533; Lilford, v. p. 19, pl. 6; Poynting, p. 11, pl. 3; *C. europæus*, Lath. Ind. Orn. ii. p. 751 (1790)); Naum. vii. p. 77, Taf. 171; *C. isabellinus*, Meyer, Taschenb. Deutsch. Vogelk. ii. p. 328 (1810); *C. isabellinus* var. *bogolubovi*, Zarudn. Bull. Soc. Imp. Nat. Mosc. (7), lxi. p. 327 (1885).

Courvite isabelle, French; *Corrione biondo*, Ital.; *Europäische-Rennvogel*, German; *Keruan djebeli*, Arab.; *Engaño-muchacho*, in the Canaries.

♂ *ad.* (N. Africa). Forehead rufous isabelline, becoming grey towards the hind crown, which, with the nape is ashy blue-grey; a broad white stripe above each eye, joining on the nape, and bordered below the eye underneath, and on the nape above with black; upper parts rufescent isabelline; primaries and primary coverts blackish; middle tail-feathers like the back, the rest isabelline becoming whitish at the top, and with a subterminal blackish patch; under parts isabelline, the lower abdomen nearly white, the breast tinged with grey, and the lower flanks tinged with blackish; axillaries and under wing-surface black; beak dark horn but greyish at the base below; legs greyish white; iris dark brown. Culmen 1·2, wing 6·05, tail 2·62, tarsus 2·15 inch. Sexes alike. The young bird is duller, has the plumage marked with crescentic dark lines and lacks the black, white, and blue on the head.

Hab. North Africa, occasionally straying into continental Europe, and not seldom as far north as Great Britain; occurred once in Denmark and once in Finland; Canaries and Cape Verde Islands; Asia, east to North-west India, and south to Arabia.

Is essentially a desert bird, frequenting dry, arid, sandy plains. It is as a rule shy, and usually runs away, which it does with great swiftness, on the approach of an intruder, or squats on the sand, when it is difficult to distinguish it from the surroundings. Its alarm-note resembles that of a Plover, and in the pairing season it utters a note like *rererer*. It feeds on insects of various kinds. It makes no nest, but in March deposits its eggs, 2, occasionally 3, in number, in a depression in the sandy soil. These are stone-buff or stone-ochre, closely spotted and marbled with purplish grey underlying-, and reddish brown or dull brown surface-markings; occasionally there is a ring of darker spots round one end. In size they measure about 1·48 by 1·8.

CHARADRIUS, Linn., 1766.

1020. Golden Plover.

CHARADRIUS PLUVIALIS.

Charadrius pluvialis, Linn. Syst. Nat. i. p. 254 (1766); Hewitson, ii. p. 291, pl. lxxvi. fig. 2; Gould, B. of E. iv. pl. 294; Dresser, vii. p. 435, pls. 515 fig. 1, 518 figs. 1, 2, 519 fig. 2; Sharpe, Cat. B. Br. Mus. xxiv. p. 191; Blanf. F. Brit. Ind. Birds, iv. p. 235; Saunders, p. 547; Lilford, v. p. 39, pl. 14; Poynting, p. 39, pl. 10; *C. africarius*, Linn. ut suprà; *C. auratus*, Suckow, Naturg. Th. ii. p. 1592 (1801); Naum. vii. p. 138, Taf. 173.

Pluvier doré, French; *Tarambola*, Portug.; *Chorlito*, Span.; *Piviere*, Ital.; *Gold-Regenpfeifer*, German; *Goud Plevier*, Dutch; *Brokfugl*, Norweg. and Dan.; *Ljung-pipare*, Swed.; *Hutti*, Lapp.; *Tunturikurmitsa*, Finn.; *Rshanka*, *Sivka*, Russ.

♂ *ad.* (Sweden). Crown, nape, and upper parts generally black or brownish black, spotted and marked with golden yellow, and to a small extent with white; forehead and superciliary stripe whitish; tail blackish, transversely marked with whitish and a little golden yellow; sides of face, neck, breast, and under parts black; flanks mottled with dusky; sides of tail-coverts white; under wing-coverts and axillaries white; bill black; legs bluish grey; iris dark brown. Culmen 1·0, wing 7·1, tail 3·4, tarsus 1·6 inch. Sexes alike, except that the female has the breast somewhat tinged with brown. In the winter the black on the throat, neck, and under parts is wanting, these parts being white; chest and flanks mottled with greyish brown and washed with golden yellow.

Hab. Europe generally, to the North Cape, breeding in Iceland, straying to Greenland, and breeding as far south as North Central Europe; Africa in winter, south to Cape Colony; Madeira; Asia, east to the Yenesei river, south, occasionally, to India.

Frequents open ground, moors, swampy localities, cultivated ground, and the sea-shore, and is as a rule shy and wary. It feeds on worms, insects, larvæ, and to some extent on berries and seeds, and feeds chiefly at night, being semi-nocturnal. Its call-note resembles the syllable *tlui*, and its nuptial call is a long shrill note, *taludl-taludl-taludl-taludl*. Its nest is a mere depression in the ground, very scantily lined with a few grass-bents, and the eggs, usually 4 in number, are deposited late in April or early in May, and are pale clay-brown or yellowish grey in ground-colour, and sometimes reddish buff, spotted and blotched with purplish brown underlying-, and rich dark brown overlying surface-markings, and in size measure about 2·0 by 1·28.

1021. EASTERN GOLDEN PLOVER.

CHARADRIUS DOMINICUS.

Charadrius dominicus, P. L. S. Müller, Natursyst. Suppl. p. 116 (1776); Sharpe, Cat. B. Br. Mus. xxiv. p. 195; Ridgway, p. 174; Saunders, p. 549; Poynting, p. 49, pl. 12; *C. fulvus*, Gmel. Syst. Nat. i. p. 687 (1788); Dresser, vii. p. 443, pls. 516, 517, figs. 2, 3; Tacz. F. O. Sib. O. p. 815; Blanf. F. Brit. Ind. Birds, iv. p. 234; Poynting, p. 45, pl. 11; *C. virginicus*, Licht. Verz. Doubl. p. 70 (1823).

Chata-battan, Hindu.; *Muneguro-shigi*, Jap.

ad. (E. Asia). Differs from *C. pluvialis* in being smaller, with the tarsus longer and more slender, and in having the axillaries smoky brown, and the under wing-coverts smoky brown with a dash of white here and there. Culmen 0·95, wing 6·25, tail 2·5, tarsus 1·55 inch.

Hab. Asia east of the Yenesei, north to Kamchatka, east to Japan, south in winter through China, India, and the Philippines to Australia; East Africa; Greenland; North and South America from the extreme north to Patagonia; has occurred as a straggler in Great Britain, Heligoland, Poland, Spain, and Italy.

In general habits it does not differ from *C. pluvialis*, but its note is said to differ, and to more resemble that of the Grey Plover. Its nest and eggs are also similar except that the latter are as a rule paler in ground-colour. In size they measure about 1·95 by 1·32.

I agree with Dr. Sharpe in uniting the Asiatic and American species, though the Asiatic form is generally smaller, but it does not otherwise differ.

SQUATAROLA, Leach, 1816.

1022. Grey Plover.

SQUATAROLA HELVETICA.

Squatarola helvetica (Linn.), Syst. Nat. i. p. 250 (1766); Audub. B. Am. pl. 334; Gould, B. of Gt. Brit. iv. pls. 36, 37; Dresser, vii. p. 455, pls. 515 fig. 2, 517 fig. 1, 518 fig. 3, 519 fig. 1; Sharpe, Cat. B. Br. Mus. xxiv. p. 182; Newton, P.Z.S. 1861, p. 398, pl. 39, fig. 2 (egg); Tacz. F. O. Sib. O. p. 835; Blanf. F. Brit. Ind. Birds, iv. p. 236; Saunders, p. 551; Lilford, v. p. 41, pl. 15; Poynting, p. 55, pls. 13, 14; *Ch. squatarola* (Linn.), Syst. Nat. i. p. 252 (1766); Naum. vii. p. 249, Taf. 178; Ridgway, p. 173.

Vanneau-Pluvier, French; *Tarambola*, Portug.; *Avefria*, Span.; *Pivieressa*, Ital.; *Kibitz-Regenpfeiffer*, German; *Goudkievit*, Dutch; *Strand-brokfugl*, Dan.; *Kust-brokfugl*, Norweg.; *Kust-pipare*, Swed.; *Rantakurmitsa*, Finn.; *Rshanka-tules*, Russ.; *Barra-batan*, Hindu.

♂ *ad.* (Spain). Forehead, sides of crown and of neck, flanks, abdomen, thighs, and under tail-coverts white; crown, hind neck, and upper part black spotted and banded with white; tail white barred with black; sides of face, throat, and breast black; under wing-coverts white or whitish; axillaries black; bill black; legs greyish black; iris dark brown. Culmen 1·2, wing 7·5, tail 2·8, tarsus 1·65, hind toe 0·15 inch. Sexes alike. In winter the upper parts are greyish brown marked with darker brown and white, the under parts white, the throat striped with ashy brown, the breast and flanks indistinctly mottled with greyish brown. In all plumages this species is recognizable by its black axillaries and small hind toe.

Hab. The extreme northern parts of Europe, Asia, and America; in winter migrating south throughout Europe, Africa, Asia, Australia, North and South America.

In general habits it resembles *C. pluvialis*, but it is more of a shore bird than that species. Its call-note is a sharp whistle readily distinguishable from that of *C. pluvialis*. Its food consists of insects, worms, small shell-fish, &c. It breeds in the high north of Eastern Europe, Asia, and America, and like the Golden Plover it makes its nest, which is a mere depression scantily lined with grass-bents, moss, or leaves, on the ground, and deposits in June, or early in July, 4 eggs, which are intermediate in coloration and marking between those of the Lapwing and Golden Plover, but are subject to considerable variation; in size they average 2·0 by 1·35.

ÆGIALITIS, Boie, 1822.

1023. GREATER SAND PLOVER.

ÆGIALITIS MONGOLA.

Ægialitis mongola (Pall.), Reis. Russ. Reichs. iii. App. p. 700 (1776); Seebohm, B. Jap. Emp. p. 308; David and Oust. Ois. Chine, p. 427; (Sharpe), Cat. B. Br. Mus. xxiv. p. 223; Blanf. F. Brit. Ind. Birds, iv. p. 238; Tacz. F. O. Sib. O. p. 822; Ridgway, p. 179; *Æ. inornata* (Gould), B. of Austr. vi. pl. 19.

♂ *ad.* (China). Differs from *Æ. geoffroyi* in being smaller, with a smaller bill and shorter tarsus, the patch on the side of the face (in breeding plumage) broader, and the rufous chest band separated from the white throat by a narrow black line. Culmen 0·75, wing 5·25, tail 2·2, tarsus 1·2 inch.

Hab. Eastern Asia, north to Kamchatka; Dauria, Japan, Mongolia, Corea, China; wintering in the Philippines, Moluccas, and Australia; has occurred in Alaska.

In habits it does not differ from *Æ. geoffroyi*, with which it is very closely allied. It breeds on the sea-shore, the nest being a depression in the ground sparingly lined with bents and leaves, and the eggs, 4 in number, are deposited in June, and are said to resemble those of *Æ. semipalmata*, but are larger and have a somewhat deeper ground-colour, in some more olive, in others more buff.

1024. SUBSP. ÆGIALITIS GEOFFROYI.

Ægialitis geoffroyi (Wagl.), Syst. Av. Charadrius, No. 19 (1827); David and Oust. Ois. Chine, p. 426; Dresser, vii. p. 475, pls. 520 fig. 2, 521; (Sharpe), Cat. B. Br. Mus. xxiv. p. 217; Blanf. F. Brit. Ind. Birds, iv. p. 237; *Charadrius leschenaulti*, Less. Man. d'Orn. ii. p. 322 (1828); Layard, B. S. Afr. p. 299.

♂ *ad.* (Syria). Forehead white; crown and nape pale reddish brown, the fore crown crossed by a black band; upper parts dull sandy brown; quills blackish, some of the inner secondaries white on the outer web; from the base of the bill through the eye with the ear-coverts a black streak; a broad rusty red band across the breast; rest of under parts, axillaries, and under wing-coverts white; upper flanks tinged with rusty red; bill blackish; legs plumbeous grey; iris dark brown. Culmen 1·0, wing 5·7, tail 2·4, tarsus 1·5 inch. The female has the fore crown and stripe through the eye brownish grey. In the winter both sexes have the sides of the head pale ashy brown, the forehead, lores, chin, throat, and under parts white, the breast tinged with pale rusty buff.

Hab. South-eastern Europe; Central Asia; Japan and China; wintering in Africa as far south as the Cape Colony and Madagascar; India, the Philippines, and Malay Archipelago to Australia.

Frequents the sea-coasts and the mouths of rivers, sand-banks, coral reefs, &c., and is a shy and wary bird. It feeds on worms, spawn, small insects, &c., and its note is a clear, flute-like whistle. With regard to its breeding habits I find nothing on record. An egg in the British Museum, said to belong to this species, is figured (Cat. Birds' Eggs, Brit. Mus. ii. pl. i. fig. 9), but I have great doubts as to its authenticity.

1025. SUBSP. ÆGIALITIS PYRRHOTHORAX.

Ægialitis pyrrhothorax, Gould, B. of E. iv. pl. 299; (Sharpe), Cat. B. Br. Mus. xxiv. p. 226; *Æ. mongolica*, Blanf. F. Brit. Ind. Birds, p. 238 (nec. Pall.).

♂ *ad.* (Yarkand). Differs from *Æ. mongola* in having the upper parts paler, the forehead entirely black with only a whitish spot in front of the eye, and the pectoral band paler. Culmen 0·7, wing 4·95, tail 1·9, tarsus 1·2 inch.

Hab. Kirghis Steppes, Central Asia east to Tibet; wintering in East Africa, India, and the Malay Peninsula and Islands.

In habits it does not differ from *Æ. geoffroyi.*

1026. CASPIAN PLOVER.

ÆGIALITIS ASIATICA.

Ægialitis asiatica (Pall.), Reis. Russ. Reichs. ii. p. 715 (1773); Naum. xiii. p. 225, Taf. 386, figs. 1, 2; Dresser, vii. p. 479, pls. 520 fig. 1, 522; (Sharpe), Cat. B. Br. Mus. xxiv. p. 230; Blanf. F. Brit. Ind. Birds, iv. p. 239; Saunders, p. 537; Lilford, v. p. 27, pl. 9; Poynting, p. 23, pl. 5; *Æ. caspia* (Pall.), Zoogr. Ross. As. ii. p. 136, tab. lviii. (1811).

♂ *ad.* (Kirghis Steppes). Forehead, a broad line over the eye, sides of head, chin, and throat white; upper parts hair-brown, the scapulars margined with ochreous; quills blackish brown; tail dark hair-brown, most of the feathers tipped with white; a broad pectoral band rich rust-red bordered above and below with black; rest of under parts and axillaries pure white; bill blackish; legs ochreous yellow; iris hazel. Culmen 1·0, wing 5·62, tail 2·1, tarsus 1·6. The female is rather paler and duller in colour, and the pectoral band is greyish brown tinged with rufous. In winter both sexes are like the female in summer, but have the pectoral band paler, greyer, and less distinct. Young birds have the feathers on the upper parts margined with ochreous buff or buffy white, and almost lack the pectoral band.

Hab. Transcaspia and Central Asia; Africa as far south as the Cape Colony in winter; has once been obtained in India; a straggler to Europe west of the Volga, having been twice obtained in Heligoland, once in England, and once in Italy.

Frequents sandy localities, chiefly inland, and the desert steppes, and in general habits does not appreciably differ from its allies. It breeds in the Kirghis steppes, on the eastern shores of the Caspian and in Turkestan, and deposits in May, in a mere depression on the ground, 3 eggs, which are ochreous in ground-colour, boldly blotched with blackish brown, and measure about 1·45 by 1·02.

1027. EASTERN DOTTEREL.

ÆGIALITIS VEREDA.

Ægialitis vereda (Gould), P.Z.S. 1848, p. 38; id. B. of Austr. vi. pl. 14; (David and Oust.), Ois. Chine, p. 425, pl. 120; (Sharpe), Cat. B. Br. Mus. xxiv. p. 232; Blanf. F. Brit. Ind. Birds, iv. p. 240.

♂ *ad.* (Saigon). Differs from *Æ. asiatica* in being larger, with the supercilium less distinct, the hind neck paler than the crown or back, and in having the under wing-lining and axillaries smoky brown and not white; bill deep olive-brown, blacker on the terminal portion; feet light brownish flesh-colour, the toes washed with grey, the joints blackish; eyelids greyish black. Culmen 1·1, wing 6·5, tail 2·5, tarsus 1·8 inch. In all plumages this species is distinguishable by its smoke-brown axillaries and under wing-coverts.

Hab. Mongolia and Northern China; the Malay Peninsula and Australia; has been once obtained on the Andamans.

In general habits it resembles its allies, and is said to be very shy and wary. Like *Æ. asiatica* it frequents sandy plains, and is said to breed on the salt plains in S.E. Mongolia, sometimes at great distances from water, but I do not find any description of its eggs.

1028. KENTISH PLOVER.

ÆGIALITIS CANTIANA.

Ægialitis cantiana (Lath.), Ind. Orn. Suppl. p. 66 (1801); (Naum.), vii. p. 210, Taf. 176; (Hewitson), ii. p. 298, pl. lxxvii. fig. 3; (Gould), B. of E. iv. pl. 298; (id.), B. of Gt. Brit. iv. pl. 40; Dresser, vii. p. 483, pl. 523; David and Oust. Ois. Chine, p. 430; (Seebohm), B. Jap. Emp. p. 309; Saunders, p. 543; Lilford, v. p. 35, pl. 12; Tacz. F. O. Sib. O. p. 833; Poynting, p. 33, pl. 8; ? *Æ. alexandrina* (Linn.), Syst. Nat. i. p. 253 (1766); Sharpe, Cat. B. Br. Mus. xxiv. p. 275; Blanf. F. Brit. Ind. Birds, iv. p. 240.

Pluvier à collier interrompu, French; *Lavandeira,* Portug.; *Charran, Pillara,* Span.; *Fratino,* Ital.; *See-Regenpfeifer,* German; *Strandplevier,* Dutch; *Hvidbrystet Strandpiber,* Dan.; *Sortbenet-Sandryle,* Norweg.; *Svartbenta Strandpipare,* Swed.; *Morskoi-suek,* Russ.

♂ *ad.* (Kent). Forehead, a broad streak over the eye, sides of head and neck, under parts, axillaries, and under wing-coverts pure white; above the white on the forehead a black patch; crown and occiput reddish brown; upper parts light brown; primaries blackish brown, the shafts chiefly white; middle tail-feathers blackish brown, the rest white; lores, a streak through the eye, ear-coverts, and a patch on each side of the breast black; bill and legs black; iris dark brown. Culmen 0·8, wing 3·95, tail 1·7, tarsus 1·05. The female has the black markings narrower, and the crown and occiput like the back, but paler. In the winter the feathers on the crown and occiput have brown margins and the black feathers on the head are blurred by white margins.

Hab. Central and Southern Europe, north to the south coast of England and Southern Scandinavia; Africa in winter, as far south as the Cape Colony; Asia Minor and Asia east to Japan, north to Dauria, south in winter through India and China to Australia.

Frequents the sea coasts, chiefly in sandy and shingly localities, and in general habits resembles *Æ. hiaticola.* It breeds both on the coast and near inland waters, the nest being a mere depression in the soil, sand, or shingle, and the eggs, 3 in number, are usually deposited in May, and are deep ochreous in ground-colour, irregularly marked and blotched with greyish black underlying, and black surface spots and lines; in size they measure about 1·26 by 0·87.

1029. RINGED PLOVER.

ÆGIALITIS HIATICOLA.

Ægialitis hiaticula (Linn.), Syst. Nat. i. p. 253 (1766); (Naum.), vii. p. 191, Taf. 175; (Hewitson), ii. p. 296, pl. lxxvii. figs. 1, 2; (Gould), B. of E. iv. p. 296; id. B. of Gt. Brit. iv. pl. 41; Dresser, vii. p. 497, pl. 525; David and Oust. Ois. Chine, p. 429; Sharpe, Cat. B. Br. Mus. xxiv. p. 256; Blanf. F. Brit. Ind. Birds, iv. p. 243; Tacz. F. O. Sib. O. p. 827; Saunders, p. 539; Lilford, v. p. 29, pl. 10; Ridgway, p. 177; Poynting, p. 25, pl. 6.

Pluvier à collier, French; *Lavadeira, Borrelho,* Portug.; *Frailecillo, Andarios,* Span.; *Corriere grosso,* Ital.; *Sand-Lóa,* Icel.; *Halsband-Regenpfeifer,* German; *Bontbekkige Plevier,* Dutch; *Stor Strandpiber,* Dan.; *Större Strandryle,* Norweg.; *Större-Strandpipare,* Swed.; *Tyllikä,* Finn.; *Puvidak,* Lapp.; *Suek-Galstutschik,* Russ.

♂ *ad.* (Sussex). Fore crown, a narrow line at the base of upper mandible, lores, a patch through the eye, and ear-coverts, a broad band crossing the lower throat, narrower behind, deep black; forehead, a broad band passing above and behind the eye, throat, a collar passing round the neck above the black one, under parts of body, and wings and axillaries pure white; hind crown, nape, and upper parts dull hair-brown; quills blackish brown, some of the inner primaries with a white mark on the outer web, the secondaries largely white; larger wing-coverts tipped with white; middle tail-feathers brown, becoming black towards the tip; the rest broadly tipped with white, the outermost white; beak orange-yellow at base, black at the point; legs orange; iris brown. Culmen 0·65, wing 5·0, tail 2·45, tarsus 0·92 inch. The female is somewhat duller in colour than the male, and in the winter both sexes have the black colour slightly sullied with dull grey. Young birds lack the black frontal and pectoral bands, and some of the feathers on the upper parts have pale margins.

Hab. Europe generally, north to Spitsbergen; Africa in winter south to Cape Colony; Asia east to Dauria, north to about 74° N. lat., and has occurred once or twice in India; Greenland, and eastern North America.

Frequents the sea coast, except that some resort to inland warrens or heaths during the nesting season, and may generally be seen on places left bare by the receding tide, or following the receding waves in search of food, which consists of small crustaceans, marine worms, aquatic insects, &c. Its cry, which is often uttered as the bird runs along, is clear, loud, and plaintive. Its flight is swift and even, and in winter it collects in small flocks and often consorts with other waders. It breeds in April, and again in June, two broods being reared in the season, and deposits 4 eggs on the ground amongst pebbles, or on sand, sometimes far from the sea, in which case the nest is lined with pebbles or small stones, sometimes constructing, and at others not making, a regular nest. The eggs are clay-yellow or ochreous buff, boldly marked with blackish grey and lilac underlying, and black surface spots and blotches, and measure about 1·27 by 1·0.

1030. LONG-BILLED RINGED PLOVER.

ÆGIALITIS PLACIDA.

Ægialitis placida (Gray), Cat. Mamm. &c. Coll. Hodgs. 2nd ed. p. 70 (1863); David and Oust. Ois. Chine, p. 428; (Seebohm), B. Jap. Emp. p. 307; Sharpe, Cat. B. Br. Mus. xxiv. p. 262; Blanf. F. Brit. Ind. Birds, iv. p. 244; Tacz. F. O. Sib. O. p. 825; *Æg. hartingi*, Swinhoe, P.Z.S. 1870, p. 136, pl. xii.

Ikaru-chidori, Ojun, Jap.

♂ *ad.* (Japan). Differs from *Æ. hiaticola* in being larger, in having the bill black and larger, no black at the base of the upper mandible, only a dusky line from the base of the bill to the eye, no white inner secondaries, and less white on the outer tail-feathers, the outermost on each side with a broad subterminal black band; bill blackish brown, the base of the lower mandible orange-yellow; legs and feet pale ochreous, claws black; iris dark brown. Culmen 0·85, wing 5·7, tail 3·0, tarsus 1·35 inch.

Hab. South-eastern Siberia, Japan, Corea, Manchuria, and China; west to North-eastern India, where it occurs in winter.

In habits it does not differ from *Æ. hiaticola*, of which it is the eastern representative. It breeds in Japan late in May, nesting in stony places near rivers, and, according to Père David, also near the Tche-kiang and Kiang-si rivers in China. Its 4 eggs are pale stone-buff, finely dotted with blackish brown, and measure about 1·38 by 1 03.

1031. Semipalmated Plover.

ÆGIALITIS SEMIPALMATA.

Ægialitis semipalmata (Bp.), Obs. Wils. 1825, No. 219; (Audub.), B. Am. pl. 330; Nelson, Rep. Nat. Hist. Coll. in Alaska, p. 126; Sharpe, Cat. B. Br. Mus. xxiv. p. 250; Tacz. F. O. Sib. O. p. 829; Ridgway, p. 176.

♂ *ad.* (Massachusetts). Differs from *Æ. hiaticola* in having a distinct web between the inner and middle toes, and in having the black collar much narrower; bill black, the basal half orange; legs pale flesh-colour, the claws black; iris deep hazel. Culmen 0·6, wing 4·68, tail 2·5, tarsus 1·0 inch.

Hab. North America generally, wintering in the West Indies, Central America, and South America to Brazil, Peru, and the Galàpagos; Plover Bay and Koliuchin Bay on the coast of Eastern Asia.

In general habits it resembles *Æ. hiaticola*, and, like that species, nests on the ground, usually near the sea. Its eggs are pale dull buff or olive-buff, speckled or irregularly spotted, chiefly on or round the larger end, with dark brown or black, and measure 1·26 by 0·94.

1032. Little Ringed Plover.

ÆGIALITIS CURONICA.

Ægialitis curonica (Gmel.), Syst. Nat. i. p. 692 (1788); Dresser, vii. p. 491, pl. 524; Saunders, p. 541; Lilford, v. p. 33, pl. 11; Poynting, p. 31, pl. 7; ? *Æ. dubia* (Scop.), Del. Faun. et Flor. Insubr. ii. p. 93 (1786); David and Oust. Ois. Chine, p. 429; Sharpe, Cat. B. Br. Mus. xxiv. p. 263; Blanf. F. Brit. Ind. Birds, iv. p. 241; Ridgway, p. 177; *Æ. minor* (Wolf and Meyer), Vög. Deutschl. i. Heft 15, Taf. 5 (1805); (Naum.), vii. p. 225, Taf. 177; (Hewitson), ii. p. 299, pl. lxxvii. fig. 4; (Seebohm), B. Jap. Emp. p. 306; (Gould), B. of E. iv. pl. 297; id. B. of Gt. Brit. iv. pl. 42; Tacz. F. O. Sib. O. p. 830.

Petit Pluvier à collier, French; *Lavandeira*, Portug.; *Andarios pequeño*, *Corriolet*, Span.; *Corriere piccolo*, Ital.; *Fluss-Regenpfeifer*, German; *Kleine Plevier*, Dutch: *Lille Strandpiber*, Dan.; *Mindre Strandryle*, Norweg.; *Mindre Strandpipare*, Swed.; *Pieni-rantaraukuja*, Finn.; *Retschnoi-suek*, Russ.; *Zirrea*, Hindu.

♂ *ad.* (Southern Europe). Differs from *Æ. hiaticola* in being much smaller, and in having the shaft of the first primary alone white, those of the rest of the quills brown; bill black with a small yellow patch at the base of the lower mandible; legs deep fleshy yellow; iris brown, the edge of the eyelid yellow. Culmen 0·62, wing 4·33, tail 2·3, tarsus 0·95 inch.

Hab. Europe generally, north to Southern Scandinavia; of very accidental occurrence in the south of England; Northern Africa in winter; Asia east to Japan; north to Dauria, south in summer in Mongolia, Manchuria, China, and Northern India, wintering in Southern India, the Moluccas, and as far south as New Guinea; of doubtful occurrence in N.W. America.

In general habits this bird resembles *Æ. hiaticola*, but affects the vicinity of inland water, such as the banks of rivers and the shores of inland lakes and ponds, especially where the ground is sandy or pebbly. Its note is slightly different and more shrill than that of its larger ally. It nests on sandy or pebbly ground, or, as I noticed in Spain, it frequently makes use of a dry patch of cow-dung; and it makes no nest. Its eggs, 4 in number, are usually deposited in May, and are stone-buff or stone-ochreous, rather finely spotted with purplish grey underlying shell-, and blackish brown surface-markings, measuring about 1·21 by 0·85.

1033. KILLDEER PLOVER.

ÆGIALITIS VOCIFERA.

Ægialitis vocifera (Linn.), Syst. Nat. i. p. 253 (1766); (Audubon), B. of Am. pl. 215; Dresser, ix. p. 345, pl. 708; (Sharpe), Cat. B. Br. Mus. xxiv. p. 242; Ridgway, p. 174; Saunders, p. 545; Lilford, v. p. 37, pl. 13; Poynting, p. 37, pl. 9.

Tildeo, Mexican; *Pijije*, in Costa Rica.

♂ *ad.* (New Jersey). Forehead, stripe above and behind the eye, chin, throat, collar round the hind neck, and under parts generally, white; fore crown, stripe from the lores through the eye, collar round the lower neck, and a band across the breast black; upper parts warm brown; larger wing-coverts tipped with white; middle tail-feathers brown, the next orange at the base, then black tipped with white, the outer ones white tinged with rufous, and barred with black; upper tail-coverts rufous; bill black; legs dull greenish; iris brown; eyelids orange-red. Culmen 0·92, wing 6·35, tail 3·8, tarsus 1·45 inch. Sexes alike. The young have the feathers on the upper parts margined with pale rufous.

Hab. The whole of temperate North America, wintering in the West Indies, Central America, and the northern portions of

South America; has occurred once in Hants and once on Tresco, one of the Scilly Islands.

Frequents not only the coast, but is also found far inland, and is a noisy, restless bird, though not particularly shy. It runs with great swiftness, and is equally active on the wing. Its food consists of insects, worms, and crustacea. It breeds from April to June, the nest being a mere depression in the ground, sparingly lined with a few grass-bents, and it is usually found nesting inland. The eggs, 4 in number, are pale clay buff or ochreous, blotched and spotted with black, with a few paler shell-markings, and occasionally with a few black streaks and lines; in size they average 1·55 by 1·12.

1034. Kittlitz's Plover.

ÆGIALITIS PECUARIA.

Ægialitis pecuaria (Temm.), Pl. Col. v. pl. 183 (1823); Harting, P.Z.S. 1874, p. 457, pl. lx. fig. 4 (egg); Dresser, ix. p. 341, pl. 709; Sharpe, Cat. B. Br. Mus. xxiv. p. 297; *Charadrius kittlitzi*, Reichenb. Syn. Av. ii. Tab. cv. fig. 1063 (1851); Layard, B. S. Af. p. 297; *Æ. varia*, Harting, Ibis, 1873, p. 262, pl. viii. (nec. Linn.).

Kanhiapraia, in Benguela; *Vikiviky*, *Kiboranto*, Malagasy.

♂ *ad.* (Nile). Forehead, a broad line passing through the eye to the nape, chin, and throat white; a narrow line on the fore crown, lores, and a band below the eye down the sides of the neck black; upper parts dusky brown; secondaries margined with white at the tips; middle tail-feathers dusky brown, the outermost pure white, the rest greyish white; lower throat and breast ochraceous rufous; rest of under parts, under wing-coverts, and axillaries white; bill and legs blackish; iris dark brown. Culmen 0·74, wing 4·0, tail 1·85, tarsus 1·2, bare part of tibia 0·65 inch. Female similar. Young birds lack the black on the forehead, and have the white on the head tinged with rusty red.

Hab. North-east Africa from the Nile Delta, and the whole of Africa, except the extreme north-western portions, down to the Cape and Madagascar.

In general habits it most nearly resembles the Little Ringed Plover. It breeds inland, though at no great distance from water, in South Africa in September, depositing its 4 eggs on the ground without making any regular nest. The eggs are olive-brown, irregularly and profusely marked with fine lines and spots of black, and measure about 1·21 by 0·82.

EUDROMIAS, Brehm, 1831.

1035. DOTTEREL.

EUDROMIAS MORINELLUS.

Eudromias morinellus (Linn.), Syst. Nat. i. p. 254 (1766); (Naum.), vii. p. 163, Taf. 174; (Hewitson), ii. p. 293, pl. lxxvi. fig. 1; (Gould), B. of E. iv. pl. 295; id. B. of Gt. Brit. iv. pl. 43; Dresser, vii. p. 507, pl. 526; Sharpe, Cat. B. Br. Mus. xxiv. p. 234; Tacz. F. O. Sib. O. p. 819; Saunders, p. 535; Lilford, v. p. 26, pl. 8; Poynting, p. 15, pl. 4.

Pluvier guignard, French; *Medio chorlito*, Span.; *Piviere tortolino*, Ital.; *Mornell-Regenpfeifer*, German; *Morinel-Plevier*, Dutch; *Pomerantsfugl*, Dan. and Norweg.; *Fjällpipare*, Swed.; *Kerjärälintu*, Finn.; *Lahula*, Lapp.; *Glupöi-suek*, Russ.

♂ *ad.* (Sweden). Crown black, the forehead margined with white; lores and a broad streak over the eye meeting round the occiput white; upper parts greyish brown, feathers on the lower back and scapulars margined with fulvous yellow, the latter and inner secondaries faintly glossed with green; short secondaries margined with white; outer tail-feathers tipped with white; chin and upper throat white; ear-coverts and lower neck pale greyish brown; on the lower neck a white band, narrowly edged above with black; fore breast and flanks yellowish red; lower breast and upper abdomen black; lower abdomen and under tail-coverts yellowish white; under wing-coverts dull greyish; bill blackish; legs brownish green, the toes blackish grey; the heel orange; iris brown. Culmen 0·85, wing 6·0, tail 2·8, tarsus 1·5 inch. Female similar, but generally rather brighter coloured. In the winter both sexes have the crown and nape yellowish white, streaked with blackish, the white streak is narrower, the under parts dull isabelline, the breast streaked with brown, and the white band ill-defined. The young resemble the adult in winter dress, but have the upper parts margined with whitish.

Hab. Northern Europe to within the Arctic Circle and Novaya Zemlya; Great Britain; Central and Southern Europe and North Africa on migration and in winter; Northern Asia as far as the shores of the Arctic Ocean; south in winter to Turkestan and Persia.

Is essentially an inhabitant of the moorland and fell, and unless subjected to persecution is fearless and confiding. Its food consists of insects of various kinds and larvæ. It breeds in the northern portions of its range, and at considerable altitudes in the central portion, making no nest, but depositing late in May or early in June its 3 eggs, in a depression in the moss or herbage on the ground. The eggs are light stone-buff or dull buff sometimes with a green tinge, boldly blotched with black, some having a few dark purplish underlying shell-markings; in size they measure about 1·55 by 1·8.

PLUVIANUS, Vieill., 1816.

1036. BLACK-HEADED PLOVER.

PLUVIANUS ÆGYPTIUS.

Pluvianus ægyptius (Linn.), Syst. Nat. i. p. 254 (1766); Gould, B. of As. vii. pl. 62; Dresser, vii. p. 521, pl. 527; Sharpe, Cat. B. Br. Mus. xxiv. p. 32; *Pl. melanocephalus* (Gmel.), Syst. Nat. i. p. 692 (1788).

Ter-el-temsach, Arab.

♂ *ad.* (Egypt). Crown, sides of head, hind neck, back, and a band passing round and meeting on the breast purplish black; a band all round the crown, rump, and under parts white; lesser and median wing-coverts, scapulars, upper tail-coverts, and tail dark blue-grey, the tail tipped with white; all but the middle feathers with a subterminal black band; abdomen, throat, and under tail-coverts washed with creamy rufescent; bill blackish; legs blue-grey; iris dark brown. Culmen 0·9, wing 5·5, tail 2·65, tarsus 1·38. Sexes alike.

Hab. Africa north to the Mediterranean, south to Angola on the west coast, and Nubia, the Blue and White Nile on the east side; Algeria; of rare or doubtful occurrence north of the Mediterranean, except in Palestine, where it has been obtained in the Jordan valley; is said to have once occurred in Sweden.

The present species, which is said to be the Trochilos of Herodotus, frequents sand-banks and the banks of rivers, and is extremely tame and confiding. During the breeding season it is noisy, its cry resembling the syllables *ting-ting-ting-ting* and *tschi-tschi-tschi-tschi*. Its food consists of worms, insects, and larvæ. It does not make any regular nest, but deposits its 2 eggs in a depression in the sand. These are not unlike those of the Cream-coloured Courser, are without gloss, somewhat coarse in grain, brownish ochreous in ground-colour, closely marked with ashy grey, yellowish brown, and reddish brown blotches and dots, and measure about 1·25 by 0·95.

HOPLOPTERUS, Bp., 1831.

1037. SPUR-WINGED PLOVER.

HOPLOPTERUS SPINOSUS.

Hoplopterus spinosus (Linn.), Syst. Nat. i. p. 256 (1766); (Gould), B. of E. iv. pl. 293; Dresser, vii. p. 539, pl. 530; Sharpe, Cat. B. Br. Mus. xxiv. p. 157.

Zic-zac, Arab.; *Pavoncella armata*, Ital.

♂ *ad.* (Egypt). Crown, nape, chin, middle of throat and neck, and breast to lower abdomen glossy black: sides of head, neck, and of throat, hind neck, sides of rump, upper tail-coverts, base of tail, under surface of wings, crissum, and under tail-coverts white; back, scapulars and inner secondaries pale buffy brown; quills and tail, except at base, black, the latter narrowly tipped with white; and outer part of wing-coverts white; a sharp spur on the carpus; bill and legs black; iris lake-red. Culmen 1·2, wing 8·15, tail 4·2, tarsus 2·85 inch. Sexes alike.

Hab. Africa south to Kordofan and the Niger district; Palestine, Asia Minor, Southern Russia, Turkey, and has also occurred in Greece, Malta, and Italy; in Asia it is said to have occurred as far east as Persia, but this is doubtful.

In general habits it has much in common with *Vanellus vulgaris*, and like that bird is wary, restless, and noisy, and whenever an intruder is noticed it flies overhead uttering its warning cry, *zac, zac, zac.* It breeds in Egypt in March and April, its nest being a mere depression in the sand, and deposits 3 or 4 eggs, which are greyish olive or warm dark ochreous, closely spotted and blotched with olive-brown and blackish, the markings being usually more numerous at the larger end; in size they measure about 1·64 by 1·23.

CHETTUSIA, Bp., 1839.

1038. SOCIABLE PLOVER.

CHETTUSIA GREGARIA.

Chettusia gregaria (Pall.), Reise Russ. Reichs. i. p. 456 (1771); Dresser, vii. p. 527, pl. 528; Sharpe, Cat. B. Br. Mus. xxiv. p. 174; Blanf. F. Brit. Ind. Birds, iv. p. 231; (Saunders), p. 553; Lilford, v. p. 24, pl. 7; Poynting, p. 59, pl. 15; *C. keptuschka* (Lepechin), Tageb. Reise Russ. Reichs. i. p. 229, footnote *b* (1774); (Gould), B. of E. iv. pl. 292.

Pavoncella gregaria, Ital.; *Keptuschka*, Russ.

♂ *ad.* (S. Russia). Forehead, a broad streak above the eye passing round the nape, chin, upper throat, lower flanks, under wing surface, upper and under tail-coverts, thighs, secondaries, larger wing-coverts, sides of rump, and outer rectrices white ; crown, lores, a narrow streak behind the eye, primaries, and outer primary coverts jet black ; upper parts brownish ashy grey, the hind neck paler ; tail white with a broad subterminal black band ; neck and breast ashy grey, the latter darker ; abdomen black but posteriorly rich chestnut-red ; legs and beak black ; iris brown. Culmen 1·5, wing 8·1, tail 3·6, tarsus 2·4, bare part of tibia 1·1 inch. Sexes alike, and the winter dress similar. Young birds have the crown brown marked with black, the white on the head tinged with buff, the upper parts darker and with pale margins, and the black and chestnut on the abdomen wanting.

Hab. South-eastern Europe; of rare occurrence in South Spain, Italy, once at Nice, once in Hungary, and once as far north as Lancashire; Africa in winter as far south as Kordofan and Senaar; Asia Minor and Central Asia, north and east to the Yenesei, south in winter to North-western India, Ceylon, and Arabia.

In habits it much resembles the Lapwing, and frequents the uplands, the steppes, grassy and sandy plains, and cultivated ground, is somewhat shy, and not noisy, only occasionally uttering its peculiar cry, *kretsch, kretsch, kretsch*. Its food consists of insects of various kinds, especially coleoptera and grasshoppers. It nests on hilly steppes, the nest being a hollow scratched in the ground, and lined with dry grass. The eggs, 4 in number, are deposited late in May, and resemble those of *V. vulgaris,* but as a rule the ground-colour is paler and the markings less bold.

1039. White-tailed Plover.

CHETTUSIA LEUCURA.

Chettusia leucura (Licht.), in Eversm. Reise nach Buchara, p. 137, (1823); Dresser, vii. p. 531, pl. 529 ; id. Ibis, 1902, p. 177, pl. vi. figs. 1, 2 (eggs) ; (Sharpe), Cat. B. Br. Mus. xxiv. p. 171 ; Blanf. F. Brit. Ind. Birds, iv. p. 233 ; *C. villotæi,* Audouin, Expl. somm. Descr. de l'Egypte, p. 388, pl. vi. fig. 2 (1825) ; Shelley, B. of Egypt, p. 233 ; *V. flavipes*, Lesson, Traité d'Orn. p. 542 (1831).

Chizi, in Cabul; *Chiric,* in Afghanistan.

♂ *ad.* (Turkestan). Upper parts brown with a lilac tinge on the back and wings ; upper tail-coverts, tail, most of the secondaries, flanks, under wing-coverts and upper throat white ; primaries black ; forehead and sides of head pale brown; fore neck brown; breast ashy grey; abdomen rosy buff or salmon-colour; bill black; legs yellow; iris reddish brown, the edge of the eyelids red. Culmen 1·25, wing 6·7, tail 2·75, tarsus 2·55 inch. Sexes alike. The young birds lack the pink tinge on the upper parts and the feathers have pale margins.

Hab. Southern Russia, Transcaspia; a rare straggler to Southern Europe, but has occurred in Southern France and Malta; North Africa in winter; in Asia it is found in Turkestan, Persia, Afghanistan, and Northern India in winter.

Is essentially a marsh bird, and is rarely found away from damp, marshy places. It is shy and wary, and is said never to consort with other waders in winter, but in the breeding season other species seek its society more especially on account of its wariness, for it immediately announces the advent of an intruder by its loud cry. It breeds in May, its nest being a heap of dry herbage, with a depression in the middle, and is placed in a damp locality, usually on the edge of a swamp, and the eggs, 2 to 4 in number, are small editions of those of *C. gregaria*, being clay-yellow in ground-colour, marked all over, but generally more profusely at the larger end, with black, the shell-markings being duller and paler, and the surface spots and blotches deeper black. In size they measure about 1·55 by 1·13.

LOBIVANELLUS, Strickl., 1841.

1040. RED-WATTLED LAPWING.

LOBIVANELLUS INDICUS.

Lobivanellus indicus (Bodd.), Tabl. Pl. Enl. p. 50 (1783); Dresser, ix. p. 353, pl. 723; (Sharpe), Cat. B. Br. Mus. xxiv. p. 149; (Blanf.), F. Brit. Ind. Birds, iv. p. 224; *L. goensis* (Gmel.), Syst. Nat. i. p. 706 (1788); Strickl. P.Z.S. 1841, p. 33.

Titai, *Titi*, Hindu.; *Kiralla*, *Kibulla*, Cing.

♂ *ad.* (Transcaspia). Head, neck, and breast deep black; a broad streak from behind the eye down the neck, under parts below the breast, and upper tail-coverts white; fore back greyish white; rest of upper parts brownish grey glossed with green, the median wing-coverts with reddish purple; quills white at base, otherwise black, the inner secondaries nearly all white; larger wing-coverts tipped with white; tail black across the middle, otherwise white; terminal half of bill black, the basal half, wattles in front of the eye, and eyelids lake-red; legs and feet yellow; iris crimson. Culmen 1·45, wing 8·22, tail 4·78, tarsus 3·2 inch. Sexes alike. The young bird has the crown brownish, the throat and sides of face white, and the feathers on the upper parts with sandy buff margins.

Hab. Transcaspia, rare in Persia, Eastern Asia to Assam; Arabia, Mesopotamia, Afghanistan, India, and Ceylon.

Frequents the steppes near water, the borders of marshes, meadow-land, and river-banks, and though not shy is wary, especially when molested. It feeds on insects of various kinds, seldom on anything else. Its flight is Lapwing-like, but strong and tolerably rapid, and it is a noisy bird, and utters its loud cry both when on the wing and when on the ground. It breeds from March to August, usually in April, and deposits in a depression on the ground its 4 eggs, which are in character like those of a Lapwing, and vary in ground-colour from pale olive-green to ochreous and reddish buff, and are profusely marked with blackish brown or black; in size they average about 1·64 by 1·2.

1041. GREY-HEADED LAPWING.

LOBIVANELLUS CINEREUS.

Lobivanellus cinereus (Blyth), J. As. Soc. Beng. xi. p. 587 (1842); Seebohm, B. Jap. Emp. p. 311; (David and Oust.), Ois. Chine, p. 422; (Sharpe), Cat. B. Br. Mus. xxiv. p. 133; (Blanf.), F. Brit. Ind. Birds, iv. p. 228; Berez. and Bianchi, Ptitz. Gansu, p. 3; *L. inornatus*, Temm. and Schleg. Faun. Jap. Aves, p. 106, pl. 63.

Kire, Jap.

♂ *ad.* (Japan). Head, neck, and breast ashy grey, the hind neck and crown tinged with brown; upper parts brown with a bronzy tinge; primaries black; short secondaries and the larger secondary coverts, sides of rump, and upper tail-coverts white; tail white with a broad black subterminal band, bordered with brown; the outermost feathers white; upper breast crossed by a narrow black band; rest of under parts and under wing-coverts white; terminal half of bill black, the basal half, lappets, and edge of eyelids, legs and feet yellow; claws black; iris red. Culmen 1·5, wing 9·3, tail 4·3, tarsus 2·92 inch. Sexes alike. In the winter the pectoral band is obscured, and the head and neck are tinged with brown. The young birds have the head and neck brown, the chin white, and lack the pectoral band.

Hab. Japan, Corea, North China and Mongolia, wintering in Burma and Eastern India, and has occurred as far south as the Andamans.

In habits it resembles the Lapwing, and like that bird is shy and wary, and when disturbed flies high above the intruder, uttering loud cries. It frequents damp, marshy localities, and feeds on insects. It breeds in April, depositing its 4 eggs in the grass, on the ridges which intersect the paddy fields. The eggs resemble those of *V. vulgaris*, but are not so pointed.

VANELLUS, Briss., 1760.

1042. THE LAPWING.

VANELLUS VULGARIS.

Vanellus vulgaris, Bechst. Orn. Taschenb. ii. p. 313 (1803); Dresser, vii. p. 545, pl. 531; Blanf. F. Brit. Ind. Birds, iv. p. 230; Saunders, p. 555; Lilford, v. p. 43, pl. 16; Poynting, p. 63, pl. 16; ? *V. capella*, Schaeff. Mus. Orn. p. 49 (1789); *Tringa vanellus*, Linn. Syst. Nat. i. p. 248 (1766); (Naum.), vii. p. 269, Taf. 179; (Sharpe), Cat. B. Br. Mus. xxiv. p. 166; (Ridgway), p. 172; *V. cristatus*, Wolf and Meyer, Hist. Nat. Ois. de l'Allem. p. 110 (1805); Gould, B. of E. iv. p. 291; id. B. of Gt. Brit. iv. pl. 33; Hewitson, ii. p. 301, pl. lxviii.; Seebohm, B. Jap. Emp. p. 312; Tacz. F. O. Sib. O. p. 838.

Vanneau dixhuit, French; *Abibe, Abecuinha*, Portug.; *Ave fria*, Span.; *Pavoncella comune*, Ital.; *Kiebitz*, German; *Kievit*, Dutch; *Vibe*, Dan. and Norweg.; *Tofsvipa*, Swed.; *Hyyppä*, Finn.; *Pigolitza, Chibis*, Russ.; *Tagere*, Jap.

♂ *ad.* (England). Forehead, crown, fore throat and upper breast velvety black; nape, sides of neck and face and under parts white; on the hind crown a long curved crest; upper parts metallic green tinged with purple; quills purplish black; wing-coverts violet-purple; upper and under tail-coverts rust-red; tail white on the basal, and black on the terminal half, the outer feathers nearly all white; bill black; legs brownish red; iris dark brown. Culmen 1·15, wing 8·8, tail 1·45, tarsus 1·8 inch. Female duller with a shorter crest. In winter both sexes have the throat white, the breast-feathers tipped with white and those on the upper parts slightly buff-tipped. The young bird resembles the above winter dress, but has the sides of head and nape washed with buff, the pectoral band small, and the feathers on the upper parts edged with buff.

Hab. The whole of Europe, north to the Arctic Circle; wintering in Southern Europe and North Africa; Canaries; Madeira, rare in the Azores; Asia Minor and Asia east to Japan, north to Dauria; South China and N.W. India in winter.

Inhabits the lowlands, plains, and moors except when breeding, in preference damp localities, and is shy and wary; when disturbed, especially when breeding, it flies overhead, swooping and casting itself about uttering its wailing cry, *pee-wit, pee-wit.* It feeds on worms and insects of various kinds. It begins to breed late in March or early in April, its nest being a mere depression in the soil, scantily lined with grass. The eggs, 4 in number, are brownish olive with a few purplish brown shell-blotches, and with many blackish brown surface spots and blotches, and measure about 1·73 by 1·35.

STREPSILAS, Illiger, 1811.

1043. TURNSTONE.

STREPSILAS INTERPRES.

Strepsilas interpres (Linn.), Syst. Nat. i. p. 248 (1766); Naum. vii. pl. 303, Taf. 180; Hewitson, ii. p. 303, pl. lxxix.; Dresser, vii. p. 555, pl. 532; Gould, B. of Austral. vii. pl. 39; id. B. of Gt. Brit. iv. pl. 60; (Sharpe), Cat. B. Br. Mus. xxiv. p. 92; Tacz. F. O. Sib. O. p. 845; Blanf. F. Brit. Ind. Birds, iv. p. 223; Seebohm, B. Jap. Emp. p. 331; Saunders, p. 557; Lilford, v. p. 46, pl. 17; Poynting, p. 69, pl. 17; (Ridgway), p. 180; *S. collaris*, (Meyer and Wolf), Taschenb. ii. p. 383, footnote (1810); Gould, B. of E. iv. pl. 318.

Tournepierre, French; *Maçarico*, Portug.; *Revuelve-piedras*, Span.; *Voltapietre*, Ital.; *Steinwältzer*, German; *Steenlooper*, Dutch; *Tildra*, Icel.; *Stenvender*, Dan.; *Stenvælter*, Norweg.; *Roskarl*, Swed.; *Goategollás*, Lapp.; *Luotolainen*, Finn.; *Kamnescharka*, Russ.; *Kio-jo-shigi*, Jap.

♂ *ad.* (Norway). Head, throat, rump, tail-coverts, and under parts below the breast white; crown and nape with black stripes; a narrow band over the forehead, a stripe from the mandible to the breast, breast, and upper flanks black; upper parts varied black, chestnut, and white; tail white with a subterminal black band; bill blackish; legs orange-red; iris dark brown. Culmen 1·0, wing 6·0, tail 2·5, tarsus 1·0 inch. Female rather duller, the head and nape darker. In winter both sexes have less chestnut in the plumage and the black feathers have white tips. The young bird has the head and nape dull brown marked with black; upper parts blackish brown marked with buff and brown, the breast dull dark brown.

Hab. Europe, north to Greenland, Iceland, and Novaya Zemlya; Africa to the Cape, Madagascar, and the Mascarene Isles; the Canaries, Madeira, and Azores; Asia, north to the Arctic Ocean and Kamchatka, east to Japan, south through China, India, and the Philippines to Australia and New Zealand; North and South America, the West Indies, and the Pacific Islands; is perhaps the most cosmopolitan species of bird.

Frequents the sea shore, especially in rocky localities, and is comparatively seldom met with on the mud-flats. It feeds on marine worms, insects and their larvæ, small crustaceans, &c.

It runs with ease, and its flight is strong and swift. Its note is a clear, loud whistle, *kee, kee, kee,* uttered first slow, then quicker. It breeds early in June on or near the sea coast, the nest being usually under a large stone or a bush, sparingly lined with grass-bents. The eggs, 4 in number, are dull greenish grey, with dull purplish underlying shell-markings and dark brown surface blotches and spots, and measure about 1·62 by 1·21.

HÆMATOPUS, Linn., 1766.

1044. Oyster-Catcher.

HÆMATOPUS OSTRALEGUS.

Hæmatopus ostralegus, Linn. Syst. Nat. i. p. 257 (1766); Naum. vii. p. 325, Taf. 181; Hewitson, ii. p. 305, pl. lxxx; Gould, B. of E. iv. pl. 300; id. B. of Gt. Brit. pl. 45; Dresser, vii. p. 567, pl. 533; Sharpe, Cat. B. Br. Mus. xxiv. p. 107; Blanf. F. Brit. Ind. Birds, iv. p. 245; Saunders, p. 559; Lilford, v. p. 47, pl. 18; Poynting, p. 75, pl. 18; *H. osculans*, Swinhoe, P.Z.S. 1871, p. 405; Sharpe, op. cit. p. 111; Tacz. F. O. Sib. O. p. 843.

Huîtrier pie, French; *Ostraceiro*, Portug.; *Ostrero*, Span.; *Beccaccia di mare*, Ital.; *Austernfischer*, German; *Scholekster*, Dutch; *Tjaldr*, Icel.; *Strandskade*, Dan.; *Kjeld*, Norweg.; *Strandskata*, Swed.; *Cagan*, Lapp.; *Rantaharakka, Piiski*, Finn.; *Morskaya-soroka, Sorotschai*, Russ.; *Darya-gajpaon*, Hindu.

♂ *ad.* (Sweden). Head, neck, and back deep black; a small spot under the eye, rump, upper tail-coverts, base of tail, under parts, and under surface of wings white; quills black, the inner webs margined with white; larger wing-coverts and some of the inner secondaries white; tail black on the terminal portion; bill orange-red, becoming yellow at the tip; legs purplish flesh-red; iris reddish; edge of eyelid orange-red. Culmen 2·85, wing 9·6, tail 4·4, tarsus 1·9 inch. Sexes alike. In winter the white spot under the eye is larger, and a white patch is on the throat.

Hab. The whole of Europe, north to the Arctic Circle; Iceland; Greenland; Africa, in winter south to Mozambique and Senegambia; Asia, east to Japan, north to Kamchatka, south in winter to South China, India, and Ceylon.

Frequents the sea shores, especially rocky parts, and is comparatively seldom seen inland. Extremely shy and wary, it starts off at the slightest sign of danger, uttering its clear, loud whistle. It feeds on worms, limpets and other shell-fish, young crabs, &c., and notwithstanding its name I know of no evidence of its ever taking oysters. It breeds from the middle of April to the latter part of May, and deposits its 3, occasionally 4, eggs amongst the gravel, or stones, slightly above high-water mark. These are stone-buff with purplish grey underlying, and blackish or blackish brown surface spots and blotches, and measure about 2·24 by 1·52.

Dr. Sharpe grants specific rank to the East Asiatic bird (*H. osculans*), but I cannot consider it even worthy of subspecific rank, as it only has, as a rule, less white on the outer primaries, and a somewhat longer bill, but even these slight differences do not appear to be constant.

1045. African Black Oyster-Catcher.

HÆMATOPUS MOQUINI.

Hæmatopus moquini, Bp. Comp. rend. xliii. p. 1020 (1856); Dresser, ix. p. 359, pl. 711; Sharpe, Cat. B. Br. Mus. xxiv. p. 119; *H. capensis* (Licht.), Verz. Doubl. p. 73 (1823 nom. nud.); Meade Waldo, Ibis, 1889, p. 13.

Corveno, in Graciosa; *Grajo do Mar*, on Lanzarote; *Cuervo marino*, on Fuerteventura.

♂ *ad.* (Fuerteventura). Entire plumage dark sooty black; bill and bare part round the eye coral-red; legs deep crimson; iris bright red. Culmen 3·45, wing 9·8, tail 4·3, tarsus 2·0 inch. Sexes alike.

Hab. South Africa, north to the Red Sea and Gaboon; Canaries; Madeira.

In habits it does not appear to differ from *H. ostralegus.* It breeds in the Canaries and in South Africa, depositing its eggs, usually 2, but sometimes 4, in number, on the sand or shingle just above high-water mark. The eggs are greyish cream-coloured, somewhat sparsely covered with coarse, irregular wavy, black and dark brown broken lines, and measure about 2·6 by 1·9.

According to Pallas (Zoogr. Ross. As. ii. p. 131), the West American Oyster-catcher, *Hæmatopus niger*, occurs on the Kurile Islands, but so far as I can ascertain no specimen has been obtained there.

RECURVIROSTRA, Linn., 1766.

1046. Avocet.

RECURVIROSTRA AVOCETTA.

Recurvirostra avocetta, Linn. Syst. Nat. i. p. 256 (1766); Naum. viii. p. 213, Taf. 204; Hewitson, ii. p. 339, pl. xcii. fig. 2; Gould, B. of E. iv. pl. 308; id. B. of Gt. Brit. iv. pl. 53; Dresser, vii. p. 577, pl. 534; David and Oust. Ois. Chine, p. 461; Sharpe, Cat. B. Br. Mus. xxiv. p. 326; Blanf. F. Brit. Ind. Birds, iv. p. 248; Tacz. F. O. Sib. O. p. 853; Saunders, p. 561; Lilford, v. p. 49, pl. 19; Poynting, p. 79, pl. 19.

Avocette à nuque noire, French; *Alfayate, Frade,* Portug.; *Boceta,* Span.; *Avocetta,* Ital.; *Avosett-säbler,* German; *Kluit,* Dutch; *Klyde,* Dan. and Norweg.; *Skärfläcka,* Swed.; *Schilokliovka,* Russ.; *Bou-mehet,* Moor.; *Halebi,* Arab.; *Kusya-chaha,* Hindu.

♂ *ad.* (Spain). Crown, sides of head to below the eye, nape, hind neck, primaries, and wing-coverts, except those at the base of the wing, black; rest of plumage white; beak slender, curved upwards, black; legs light blue; iris reddish brown. Culmen 4·0, wing 8·5, tail 3·45, tarsus 3·65 inch. Sexes alike. In the winter the black on the upper parts is sullied with grey, and the middle tail-feathers are tinged with brownish grey.

Hab. Europe, north to Southern Sweden; formerly an inhabitant of, but now only an accidental visitant to Britain; Africa in winter as far south as the Cape Colony; Asia, east to Mongolia and China, north to Dauria, south to India and Ceylon.

Frequents damp marshy localities, and is exceedingly shy and wary. Its note is a clear, loud *kluit,* uttered several times in succession, and its food consists of small aquatic insects which it obtains from the surface by swaying sideways with the bill, the action reminding one forcibly of a mower cutting grass. It wades far in the water, and will when necessary swim, which it does with ease. It breeds in May, the nest being a depression in the soil, or the dry mud near the water, scantily lined with a few grass-bents, and the eggs, 3 to 4 in number, are clay-buff or stone-ochre with a faint greyish tinge, with blackish grey underlying shell-markings and bold black surface spots and blotches, and measure about 2·1 by 1·5.

HIMANTOPUS, Briss., 1760.

1047. BLACK-WINGED STILT.

HIMANTOPUS CANDIDUS.

Himantopus candidus, Bonnat. Tabl. Encycl. Méth. i. p. 24 (1791); Gould, B. of Gt. Brit. iv. pl. 34; Dresser, vii. p. 587, pls. 535, 536; David and Oust. Ois. Chine, p. 462; Blanf. F. Brit. Ind. Birds, iv. p. 247; Saunders, p. 563; Poynting, p. 85, pl. 20; *Charadrius himantopus,* Linn. Syst. Nat. i. p. 255; (Naum.), viii. p. 191, Taf. 203; (Sharpe), Cat. B. Br. Mus. xxiv. p. 310; *H. melanopterus,* Meyer, Ann. Wetter. Gesellsch. iii. p. 177 (1814); Gould, B. of E. iv. pl. 289; Hewitson, ii. p. 342, pl. xcii. fig. 1; Lilford, v. p. 51, pl. 20.

Echasse blanche, French; *Fuzellos,* Portug.; *Cigüeñuela,* Span.; *Cavalier d'Italia,* Ital.; *Grauschwänziger Stelzenläufer,* German; *Steltkluit,* Dutch; *Rödbenet-Styltelöber,* Dan.; *Chodulotschnik, Soldatka,* Russ.; *Bou-ksaiba,* Moor.; *Bidji, Suqdah,* Arab.; *Gajpaun, Tinghur,* Hindu.

♂ *ad.* (Sarepta). Hind crown, nape, and hind neck black intermixed with white; upper portion of back and wings deep black glossed with bottle-green or purplish green; outer tail-feathers white, the rest grey; rest of plumage pure white; bill blackish; legs rose-pink; iris deep carmine-red. Culmen 2·75, wing 9·5, tail 3·2, tarsus 4·6 inch. The female has the hind crown and nape with the hind neck dull blackish grey, and the back, scapulars, and inner secondaries dull blackish brown; otherwise like the male. The male sometimes has the whole head and neck white. Young birds have the hind neck grey and the feathers on the upper parts with brownish white margins.

Hab. Southern Europe, visiting Britain, Holland, Denmark, France, Switzerland, and Hungary; the whole of Africa; Central and Southern Asia, east to China, south to India and Ceylon.

In habits it is as a rule tame and confiding. It steps daintily about or wades in the shallow water in search of food, which consists of gnats, aquatic insects of various kinds picked off the surface, and larvæ. Its note is a clear, loud whistle, but it is not a noisy bird. It breeds in May, often in large communities, placing its nest on the dense floating herbage, in which case it is strongly built of rushes and reed-bents, or else on the dry mud, in which case the nest is a very slight structure. The eggs, 4 in number, are paler or darker warm stone-buff, boldly spotted and blotched with black or blackish brown, and measure about 1·71 by 1·23.

PHALAROPUS, Briss., 1760.

1048. Red-necked Phalarope.

PHALAROPUS HYPERBOREUS.

Phalaropus hyperboreus (Linn.), Syst. Nat. i. p. 249 (1766); Hewitson, ii. p. 370, pl. civ. fig. 1; Gould, B. of E. iv. p. 336; id. B. of Gt. Brit. iv. pl. 83; Dresser, vii. p. 597, pls. 537, 539, fig. 2; (David and Oust.), Ois. Chine, p. 482; (Audubon), B. Am. v. p. 295, pl. 340; Sharpe, Cat. B. Br. Mus. xxiv. p. 698; Seebohm, B. Jap. Emp. p. 318; Blanf. F. Brit. Ind. Birds, iv. p. 281; Saunders, p. 567; Lilford, v. p. 56, pl. 22; Poynting, p. 95, pl. 22; *P. lobatus* (Linn.), Syst. Nat. i. p. 149 (1766); Ridgway, p. 145; *P. angustirostris,* Naum. viii p. 240, Taf. 205; *P. cinereus,* Meyer, Taschenb. ii. p. 417, (1810); Tacz. F. O. Sib. O. p. 848.

Phalarope cendré, French; *Schmalschnäbliger-Wassertreter,* German; *Sundhani, Odinshani,* Icel.; *Odinshane,* Dan.; *Smalnæbet-Svömsneppe,* Norweg.; *Smalnäbbad-Simsnäppa,* Swed.; *Kaitanokka-Vesipääskynen,* Finn.; *Pavgui,* Lapp.; *Plavuntschik,* Russ.

♂ *ad.* (Lapland). Crown, nape, and upper parts sooty blackish, the back and scapulars margined with ochreous; wings blackish, the coverts tipped with white; tail blackish brown; sides of face, a band across the breast, and flanks blackish, the first slightly marked with ochreous; a bright fox-red patch on each side of the neck; rest of under parts white; bill blackish, the base of the lower mandible yellowish; legs greyish plumbeous; toes lobed, the webs paler; iris dark brown. Culmen 1·05, wing 4·0, tail 1·95, tarsus 0·8 inch. The female is larger and brighter coloured. In winter the fore crown, lores, sides of head, and under parts are white; hind crown, nape, and hind neck dusky brown; mantle blackish brown with buffy white margins.

Hab. Northern Europe, up to the North Cape; Iceland; Southern Europe and North Africa (rarely) in winter; Asia, north to Kamchatka, east to Japan, south in winter to China, India, and the Malay Archipelago; North America from the Arctic regions, south in winter to Guatemala.

Frequents the sea coasts in winter and inland pools and lochs during the breeding season, and is extremely tame and confiding. It swims with ease, and even dives half under the surface of the water in search of its food, which consists of worms, small shrimps, crustacea, and marine insects. Its flight closely resembles that of a Sandpiper, and its note is a clear *tirrr.* It breeds from early in June to July, its cup-shaped nest of grass and aquatic plants being placed on the wrack on the margins of, or more often in small islets in, lakes. The eggs, 4 in number, are clay-yellow, ochreous, or brown, spotted or blotched with dark umber-brown or blackish, and measure about 1·17 by 0·85.

1049. GREY PHALAROPE.

PHALAROPUS FULICARIUS.

Phalaropus fulicarius (Linn.), Syst. Nat. i. p. 249 (1766); Aud. B. of Am. pl. 255; Gould, B. of Gt. Brit. iv. pls. 81, 82; Newton, P.Z.S. 1867, pl. xv. fig. 1 (egg); David and Oust. Ois. Chine, p. 481; Seebohm, B. Jap. Emp. p. 318; Dresser, vii. p. 605, pls. 538, 539, fig. 1; (Sharpe), Cat. B. Br. Mus. xxiv. p. 693; (Tacz.), F. O. Sib. O. p. 851; Blanf. F. Brit. Ind. Birds, iv. p. 282; (Ridgway), p. 144; Saunders, p. 565; Lilford, v. p. 53, pl. 21; Poynting, p. 91, pl. 21; *P. platyrhynchus,* Temm. Man. d'Orn. p. 459 (1815); Naum. viii. p. 255, Taf. 206; Gould, B. of E. iv. pl. 337; *P. lobatus* (nec. Linn.); Hewitson, ii. p. 368, pl. civ. fig. 2.

Phalarope gris, French; *Falaropo rosso,* Ital.; *Plattschnäbliger Wassertreter,* German; *Rosse Frangepoot,* Dutch; *Thorshani,* Icel.; *Brednæbet-Vandtræder,* Dan.; *Brednæbet-Svömsneppe,* Norweg.; *Brednäbbad-Simsnäppa,* Swed.; *Leveänokka-Vesipääskynen,* Finn.; *Plosconosey-plavuntchik,* Russ.

♀ *ad.* (Labrador). Crown, nape, chin, and base of bill black; upper parts black margined with rusty yellow; short secondaries margined, and wing-coverts tipped, with white; upper tail-coverts rusty red marked with blackish brown; middle tail-feathers blackish, the rest slate-grey; a white patch on the sides of the head; neck and under parts rich dark rusty red; bill flat, yellowish, tipped with black; legs dull olivaceous; iris dark brown. Culmen 1·1, wing 5·35, tail 2·8, tarsus 0·85 inch. The male is smaller, duller in colour, and the white patch on the face is almost obsolete. In winter the upper parts are dark French-grey, the head, neck, and under parts white, with a broad blackish streak through and behind the eye. The young bird has the crown, hind neck, back, and scapulars blackish with ochreous margins; wing-coverts, rump, and upper tail-coverts plumbeous bordered with buff and ochreous; rest of head, neck, and under parts white, the throat and breast tinged with brownish buff.

Hab. Breeds in Greenland, Iceland, Spitsbergen, not in Norway, and the extreme northern portions of the Old and New Worlds, ranging south in winter to the Mediterranean in Europe, to China, has once occurred in India, and is recorded from New Zealand; on the American continent it occurs as far south as Chili in winter.

In habits and nidification it closely resembles *P. hyperboreus,* but its note is said to be more Finch-like, and it usually nests on the small islands off the coast, and not on the main land. Its eggs, 4 in number, also resemble those of *P. hyperboreus,* but are as a rule somewhat stouter and larger, and some have a paler ground-colour.

SCOLOPAX, Linn., 1766.

1050. WOODCOCK.

SCOLOPAX RUSTICULA.

Scolopax rusticula (Linn.), Syst. Nat. i. p. 243 (1766); Naum. viii. p. 361, Taf. 211; Hewitson, ii. p. 348, pl. xcvi.; Gould, B. of E. iv. pl. 319; id. B. of Gt. Brit. iv. pl. 77; Dresser, vii. p. 615, pl. 540; Seebohm, B. Jap. Emp. p. 347; David and Oust. Ois. Chine, p. 475; Sharpe, Cat. B. Br. Mus. xxiv. p. 671; Tacz. F. O. Sib. O. p. 949; Blanf. F. Brit. Ind. Birds, iv. p. 283; Ridgway, p. 149; Saunders, p. 569; Lilford, v. p. 58, pls. 23, 24; Poynting, p. 103, pl. 23.

Bécasse ordinaire, French; *Gallinhola*, Portug.; *Becada*, *Chocha*, Span.; *Beccaccia*, Ital.; *Waldschnepfe*, German; *Woudsnep*, Dutch; *Skovsneppe*, Dan.; *Rugde*, Norweg.; *Morkulla*, Swed.; *Lehtokurppa*, Finn.; *Waldschnep*, *Shabashka*, Russ.; *Simtitar*, Hindu.; *Himar el hedjel*, Moor.; *Hodo-shigi*, Jap.

♂ *ad.* (Smyrna). Forehead dull light grey marked with dark brown; hind head black crossed by three irregular yellowish buff and rusty brown bands; upper parts reddish brown, barred and marked with black and warm ochreous; tail black and marked with rusty red and tipped with buffy grey; chin white; sides of head greyish, marked with brown and rufous; under parts dull rufous white with narrow undulating transverse dusky brown bars; bill dull flesh-colour becoming dark brown at the end; legs greyish flesh-brown; iris blackish brown. Culmen 3·2, wing 7·7, tail 3·35, tarsus 1·4 inch. Sexes alike. The young bird has the outer webs of the primaries with distinct fulvous notches, the upper parts rather darker, and the under parts paler.

Hab. Northern Europe and Asia, north to about 66–67°, breeding however as far south as the Azores, Canaries, Madeira, and the Himalayas; wintering in South Europe, rarely in North Africa, in Japan, China, and India; accidental in Eastern North America.

Is chiefly nocturnal in its habits, remaining during the daytime till evening in dense covers, especially where the soil is damp, and feeding at night, its food consisting of worms and insects of various kinds. In the breeding season the male flies along certain regular routes, uttering its peculiar call *orrt, orrt, pisp.* Its nest is a hollow in the ground thickly lined with dry leaves, usually in the borders of a grove or a sparse thicket, and the eggs, 4 in number, are deposited late in April or early in May. These are creamy buff or dark stone-buff with pale dull purplish shell-markings and dark brown surface spots, these last being more numerous at the larger end. In size they measure about 1·75 by 1·32. The young are conveyed from the nest to their feeding grounds by being carried between the parents' thighs.

ROSTRATULA, Vieill., 1816.

1051. PAINTED SNIPE.

ROSTRATULA CAPENSIS.

Rostratula capensis (Linn.), Syst. Nat. i. p. 246 (1766); (Layard), B. of S. Afr. p. 334; (David and Oust.), Ois. Chine, p. 480; (Milne-Edw. and Grandid.), Hist. Nat. Madag. pl. 261 and pl. 306, fig. 9 (eggs); (Seebohm), B. Jap. Emp. p. 340; Sharpe, Cat. B. Br. Mus. xxiv. p. 683; Blanf. F. Brit. Ind. Birds, iv. pp. 293; *R. bengalensis*, (Linn.), tom. cit. i. p. 263.

Ohari, Nepal.; *Tibud, Panlawa,* Mahr.; *Tama-shigi,* Jap.

♂ *ad.* (India). Crown and nape olivaceous brown; a broad median stripe, a narrow ring round, and a stripe behind the eye buff; hind neck and fore back ashy brown narrowly dark barred; upper parts black varied with rufous grey and yellow and washed with olivaceous; a broad buff stripe on each side of the back; wing-coverts and quills with ovate yellowish and rusty spots; upper tail-coverts and tail blue-grey with yellowish ovate spots and bars; chin nearly white; throat and upper breast ashy brown with dull white stripes, bordered below with blackish; sides of breast olive-brown and black; rest of under parts white; bill, legs, and iris olive-brown. Culmen 2·1, wing 5·0, tail 1·7, tarsus 1·7 inch. Female larger, much richer coloured; sides of head rufous becoming chestnut-red on the throat down to the black band across the breast; mantle dark lead-grey with narrow black bars; a tuft of white lanceolate feathers under the scapulars in all ages. Young birds resemble the male adult.

Hab. Africa south of the Sahara, but ranging in the east to the Nile Delta; Madagascar; Asia Minor (?); Afghanistan, Kashmir, and the Indian Peninsulas, east to Japan and China, south in winter to Java, Sumatra, Borneo, and the Philippines.

Frequents moist or grassy localities often where there are bushes, is Rail-like in its general habits and flight, and hard to flush, affording poor sport. It feeds on insects and mollusca, and also to some extent on grain and grass seeds. The note of the female is a guttural croak, that of the male shriller. It is said to breed twice in the year, and in India its nest has been found at all seasons. The nest is a mere hollow in the ground, often with a pad of grass or rushes, and the eggs, 4 in number, which are very small for the size of the bird, only measuring about 1·40 by 0·99, are clear yellowish buff, boldly blotched with rich brownish black, here and there becoming rich raw sienna-brown.

GALLINAGO, Leach, 1816.

1052. DOUBLE SNIPE.

GALLINAGO MAJOR.

Gallinago major (Gmel.), Syst. Nat. i. p. 661 (1788); (Naum.), viii. p. 291, Taf. 208; (Hewitson), ii. p. 351, pl. xcvii.; (Gould), B. of E iv. pl. 320; id. B. of Gt. Brit. iv. pl. 78; Dresser, vii. p. 631 pl. 541; Sharpe, Cat. B. Br. Mus. xxiv. p. 626; Saunders, p. 571 Lilford, v. p. 59, pl. 25; Poynting, p. 109, pl. 24.

Grande Bécassine, French; *Narseja grande,* Portug.; *Agachadiza-real,* Span.; *Croccolone,* Ital.; *Grosse Sumpfschnepfe,* *Doppelschnepfe,* German; *Poelsnip,* Dutch; *Tredækker,* Dan.; *Dobbelt-Bekkasin,* Norweg.; *Dubbel Beckasin,* Swed.; *Heinäkurppa,* Finn.; *Dupel, Leshenok,* Russ.

♂ *ad.* (Denmark). Forehead and sides of head buffy white dotted with blackish brown; centre of crown and nape black with a central pale buff streak; upper parts blackish brown variegated with creamy buff and rufous; a broad stripe on each side of the back creamy buff; quills blackish brown; wing-coverts tipped with dirty white; middle tail-feathers blackish at base, then rufous variegated with black, the rest broadly tipped with white, the three outermost half white; chin, neck, and throat buff, the two last marked with blackish brown; under parts white closely barred with blackish brown, the breast and flanks tinged with buff; bill dull flesh-coloured at the base darkening to black towards the end; legs dull flesh-colour, the joints plumbeous; iris dark brown. Culmen 2·4, wing 5·5, tail 2·5, tarsus 1·4 inch. Sexes alike. The young have the upper parts more rufous, the wings less marked with white, and the under parts more obscurely marked.

Hab. Northern Europe up to about 69° N. lat. in Norway, 65° in Sweden and Russia, but not above 62° in Finland; wintering in Southern Europe, and Africa as far south as the Cape Colony; Asia east to the Yenesei valley and Persia; a frequent visitor to Great Britain.

Like the Woodcock the present species is chiefly nocturnal in its habits, and frequents swampy damp localities. It is always seen singly, never in wisps like the Common Snipe, and its flight is heavier and more direct. It may always be distinguished from that species by its shorter bill and legs, and by the large amount of white on the tail. In the spring they frequent regular "drumming" places, like some of the Grouse, and fight for the possession of the females. Its note *bipbip, bipbiperere, biperere,* may then be heard at some distance if the night is still. Its food consists of worms, small slugs, insects, and larvæ, and it feeds chiefly at night. Its nest is a mere depression in the ground, sparingly lined with a few grass straws, and the eggs are usually deposited in June. These are pale olive-grey or olivaceous stone-buff with purplish grey underlying shell-markings, and bold blackish brown surface spots and blotches, and measure about 1·75 by 1·24.

1053. SINGLE SNIPE.

GALLINAGO CÆLESTIS.

Gallinago cœlestis (Frenzel), Beschr. Vög. und Eier Wittenb. p. 58, (1801); Dresser, vii. p. 641, pls. 542, 543; Saunders, p. 573;

Poynting, p. 115, pl. 25; Blanf. F. Brit. Ind. Birds, iv. p. 286; *Scolopax gallinago*, Linn. Syst. Nat. i. p. 244; Naum. viii. p. 310, Taf. 209; Hewitson, ii. p. 353, pl. xcviii.; Gould, B. of E. iv. pl. 321, fig. 2; Seebohm, B. Jap. Emp. p. 346; (Sharpe), Cat. B. Br. Mus. xxiv. p. 633; Lilford, v. p. 63, pl. 26; (Ridgway), p. 150; *G. scolopacina*, Bp. Comp. List. p. 52 (1838); Tacz. F. O. Sib. O. p. 960; Gould, B. of Gt. Brit. iv. pl. 79; David and Oust. Ois. Chine, p. 478; *G. sabinii* (Vigors), Trans. Linn. Soc. xiv. p. 557 (1825); Gould, B. of E. iv. pl. 321, fig. 1; Lilford, v. p. 64, pl. 27; Poynting, p. 115, pl. 25.

Chèvre volante, French; *Narseja ordinaria*, Portug.; *Agachadiza*, Span.; *Beccacino reale*, Ital.; *Moorschnepfe*, German; *Watersnip*, Dutch; *Myrispita*, Icel.; *Dobbelt Bekkasin*, Dan.; *Enkelt Bekkasin*, Norweg.; *Enkelbeckasin*, Swed.; *Mäkastak*, Lapp.; *Taivan-vuohi*, *Taivan-jaari*, Finn.; *Bekass*, *Barachĕk*, Russ.; *Choseh*, Arab.; *Boumonkar*, Moor.; *Chaha*, *Bharak*, Hindu.; *Ji-shigi*, Jap.

♂ *ad.* (England). Crown blackish brown with a central and two lateral buff stripes; upper parts black varied with rufous and warm buff, the last forming long lines on each side of the back; quills blackish, the first margined and the wing-coverts tipped and slightly barred with dull white; middle tail-feathers black tipped with rufous marbled and barred with black, the rest rufous buff barred with blackish; lores blackish; neck, throat, and upper breast buffy white varied with blackish; flanks and axillaries white barred with blackish; bill pale reddish brown at the base, otherwise dark brown; legs pale greenish; iris dark brown. Culmen 2·8, wing 5·1, tail 2·4, tarsus 1·35. Female similar but a trifle larger. The young bird is duller in colour, and is more rufous, especially on the breast and neck.

Sabine's Snipe (*G. sabinii*) is merely a melanite form.

Hab. Europe generally, north to about 69° N. lat.; Iceland, Greenland; Madeira, Canaries, and Azores; North Africa and Southern Europe in winter; Asia north to Kamchatka, east to Japan, south in winter to India, China, and as far south as Batchian; of accidental occurrence in Bermuda.

Inhabits marshes and damp localities, and is as a rule shy and wary. Though not strictly nocturnal it is crepuscular, feeding in the early morning and late evening, its food consisting chiefly of worms, in search of which it probes with its bill, the terminal portion of which is soft and sensitive. Its note is a double cluck, *tjick-tjuck, tjick-tjuck*, and in the spring it produces, when on the wing, a peculiar drumming or bleating sound, caused by the stiff tail feathers as the bird drops swiftly through the air with extended tail. The nest is a mere depression in the ground, scantily lined with a few grass-bents, and the eggs, 4 in number, which are usually deposited in the latter part of April, vary in ground-colour from stone-greenish to greenish buff, with pale purplish grey underlying shell-markings, and umber-brown surface spots and blotches, and measure about 1·61 by 1·7. As a rule they are more heavily blotched at the larger end.

In North America the present species is replaced by a closely allied form, *Gallinago delicata* (Ord), differing in having 16 tail-feathers instead of 14 as in *G. cœlestis*, the under wing-coverts and axillaries much more broadly barred with dull slate, the bill shorter, usually below 2·75, and the tarsus shorter. This form is said, on somewhat doubtful evidence, to have occurred in Britain.

1054. PIN-TAILED SNIPE.

GALLINAGO STENURA.

Gallinago stenura (Kuhl), fide Bp. Ann. Stor. Nat. Bologna, iv. fasc. xiv. p. 335 (1830); David and Oust. Ois. Chine, p. 478; Sharpe, Cat. B. Br. Mus. xxiv. p. 619; (Seebohm), B. Jap. Emp. p. 345; Tacz. F. O. Sib. O. p. 959; Blanf. F. Brit. Ind. Birds, iv. p. 289; Dresser, Ibis, 1802, p. 179, pl. vi. figs. 3, 6 (eggs).

♂ *ad.* (N. Siberia). Differs from *G. cœlestis* in having normally 26 tail-feathers, the 10 middle ones broad, and the rest shorter, very narrow and stiff, the wing lining and axillaries more broadly barred, the bill not so broad at the point, and the white margins to the secondaries narrower or obsolete. Culmen 2·35, wing 4·8, tail 1·8, tarsus 1·25 inch. Sexes alike.

Hab. Siberia, west to the Yenesei valley, and has been recorded from Japan; in winter is found in China, Corea, India, Ceylon, and the Malay archipelago.

In habits it much resembles *G. cœlestis*, but owing to its beak being less sensitive it probes less and feeds more on insects, grubs, crustacea, &c., than worms, is more often found on dry grass and stubbles, and its cry is somewhat dissimilar, and sharper. Its flight is heavier and more like that of *G. major*, and its drumming sounds like bubbling water, and is continued longer than that of *G. cœlestis*. It breeds on the Yenesei in about 65° 40′ N. lat., its nest being similar to that of *G. cœlestis*, but its 4 eggs are larger, more profusely marked, especially at the larger end, and have the ground-colour as in those of *G. major*. In size they average 1·65 by 1·18.

1055. Swinhoe's Snipe.

GALLINAGO MEGALA.

Gallinago megala, Swinhoe, Ibis, 1861, p. 343; David and Oust. Ois. Chine, p. 479; Seebohm, B. Jap. Emp. p. 343; Sharpe, Cat. B. Br. Mus. xxiv. p. 624; Tacz. F. O. Sib. O. p. 956.

Kharaldzin, Buriat.; *Toutagaldzin*, Tungus.

♂ *ad.* (Lake Baikal). Differs from *G. stenura* in having 20 tail-feathers, the 5 lateral ones on each side attenuated, the under wing surface, axillaries, and flanks bolder and closely barred with black. Culmen 2·25, wing 5·5, tail 2·15, tarsus 1·33 inch.

Hab. Eastern Siberia (the Southern Baikal, Dauria, the Amoor, and the Ussuri rivers); Japan; Corea; S.E. Mongolia; China; in winter south to the Philippines, Borneo, and the Moluccas.

In habits it does not appear to differ from *G. stenura*, but its eggs seem to differ greatly from those of that species, being, according to Taczanowski, in form like those of *Scolopax rusticula*, in colour pale cream or ochreous, the shell-markings reddish grey and the surface spots and markings reddish brown or brown, and measure about 1·63 by 1·22.

1056. New Holland Snipe.

GALLINAGO AUSTRALIS.

Gallinago australis (Lath.), Ind. Orn. Suppl. p. lxv. (1801); (Gould), B. of Austr. vi. pl. 40; Seebohm, B. Jap. Emp. p. 342; Sharpe, Cat. B. Br. Mus. xxiv. p. 652.

Yama-shigi, Jap.

♂ *ad.* (Japan). Larger and stouter than *G. cœlestis*, the light markings on the upper parts paler, more buffy isabelline; throat, neck, breast, and under tail-coverts washed with warm ochreous buff; the two outer tail-feathers somewhat attenuated; bill yellowish olive at the base, otherwise brown; legs olive yellowish; iris dark brown. Culmen 3·0, wing 6·4, tail 2·25, tarsus 1·35 inch.

Hab. Japan, migrating south for the winter to Australia and Tasmania.

In general habits it does not differ from *G. cœlestis*, but it flies heavier and sits closer, but on being flushed its note is similar, and it also frequents similar damp localities. It breeds in Japan on Fuji-yama at 2,000 to 3,000 feet altitude in May and June, its nest being a hollow in the ground amongst grass, and its 4 eggs are stone-buff, blotched chiefly at the larger end with deep umber-brown, and measure about 1·75 by 1·19.

1057. SOLITARY SNIPE.

GALLINAGO SOLITARIA.

Gallinago solitaria, Hodgson, Glean. in Science, iii. p. 238 (1831); David and Oust. Ois. Chine, p. 476, pl. 122; (Temm. and Schlegel), Faun. Jap. Aves, p. 112, tab. lxviii.; (Seebohm), B. Jap. Emp. p. 342; Sharpe, Cat. B. Br. Mus. xxiv. p. 654; Blanf. F. Brit. Ind. Birds, iv. p. 290; *G. hyemalis* (Eversm.), Bull. Soc. Mosc. 1845, p. 257; Tacz. F. O. Sib. O. p. 953.

♂ *ad.* (Japan). Upper parts generally dark brown irregularly marked with rufous and white, not buff; crown with an irregular median white stripe; a line from the base of the bill to behind the eye and chin white; quills brown very narrowly margined externally with whitish, the first mottled; tail-feathers black at base, white towards the end, irregularly dark barred; throat and breast brown, slightly marked with white; rest of under parts white, all but middle of abdomen barred with blackish; bill plumbeous, black at tip; base of lower mandible yellowish brown; feet dull olive green; iris dark brown. Culmen 2·9, wing 6·4, tail 2·85, tarsus 1·3 inch. Sexes alike.

Hab. The Himalayas west to Afghanistan and the Altai; Eastern Central Asia and Siberia; north to Kamchatka; Tibet; Mongolia; Japan; in winter south to Northern India and China.

Inhabits marshes as well as the vicinity of forests, and feeds chiefly on insects and grubs. In general habits and flight resembles *G. stenura*. Its nest and eggs are unknown.

1058. JACK SNIPE.

GALLINAGO GALLINULA.

Gallinago gallinula (Linn.), Syst. Nat. i. p. 244 (1766); (Naum.), viii. p. 344, Taf. 210; (Hewitson), p. 355, pl. xcix.; (Gould), B. of E. iv. pl. 322; (id.), B. of Gt. Brit. iv. pl. 80; Dresser, vii. p. 653, pl. 544; David and Oust. Ois. Chine, p. 479; (Seebohm), B. Jap. Emp. p. 344; (Sharpe), Cat. B. Br. Mus. xxiv. p. 665; (Tacz.), F. O. Sib. O. p. 964; Blanf. F. Brit. Ind. Birds, iv. p. 292; Saunders, p. 575; Lilford, v p. 67, pl. 28; Poynting, p. 119, pl. 26.

Bécassine sourde, French; *Narseja pequeña,* Portug.; *Agachadiza pequeña,* Span.; *Frullino,* Ital.; *Halbschnepfe,* German; *Bokje,* Dutch; *Enkelt-Bekkasin,* Dan.; *Smaabekkasin,* Norweg.; *Halfenkel-Beckasin,* Swed.; *Ucca-mäkastak,* Lapp.; *Pieni Taivanjaara,* Finn.; *Bekass-stooshik, Garschnep,* Russ.

♂ *ad.* (Lapland). A broad central and two superciliary stripes on the crown black, the crown marked with deep rufous; rest of head yellowish buff; hind neck and fore back brown variegated with dark brown and white; back and scapulars black glossed with green and purple and marked with chestnut; a lateral ochreous stripe on each side; wing-coverts margined with dull grey; rump black glossed with purple; tail black margined and mottled with rufous, the middle feathers elongated; chin and upper throat white; lower throat, breast, and flanks greyish buff clouded with reddish brown, and marked with dark brown; rest of under parts white, the under tail-coverts striped with brown; bill yellowish fleshy at base, otherwise blackish; legs greyish, tinged with green at the joints; iris dark brown. Culmen 1·7, wing 4·25, tail 1·9, tarsus 0·95 inch. Female rather duller. In winter the upper parts are less glossed with green and purple.

Hab. Northern Europe and Asia, north to above the Arctic Circle, breeding in the high north; in winter south to Britain, the Mediterranean, North Africa, India, Ceylon, and China; rare in Japan in winter.

Is less shy and lies closer than *G. cœlestis,* which it otherwise much resembles, and like that bird remains hidden during the day, and feeds in the evening and early morning, obtaining its food chiefly by probing in the soft soil of the damp places it frequents. It produces also a loud sound in the breeding season. Its nest is a hollow in the ground scantily lined with a few grass straws. The eggs, 4 in number, are very large for the size of the bird, and are usually deposited in June; they resemble those of *G. cœlestis,* but are more varied, often richer in colour, and measure about 1·55 by 1·05.

LIMICOLA, Koch, 1816.

1059. BROAD-BILLED SANDPIPER.

LIMICOLA PLATYRHYNCHA.

Limicola platyrhyncha (Temm.), Man. d'Orn. p. 398 (1815); (Hewitson), ii. p. 359, pl. c.; (Gould), B. of E. iv. p. 331; Dresser, viii. p. 3, pl. 545; Sharpe, Cat. B. Br. Mus. xxiv. p. 612; Blanf. F. Brit. Ind. Birds, iv. p. 279; Saunders, p. 577; Lilford, v. p. 74, pl. 30; Poynting, p. 127, pl. 28; *L. pygmæa,* Koch (nec. Lath.), Baier. Zool. p. 316 (1816); Naum. viii. p. 271, Taf. 207; Gould, B. of Gt. Brit. iv. pl. 75.

Gambecchio frullino, Ital.; *Kleiner-Sumpfläufer*, German; *Brednæbet-Strandlöber*, Dan.; *Brednæbet Strandvibe*, Norweg.; *Myrsnäppa*, Swed.; *Ucca-jäggiloddi*, Lapp.; *Jänkäsirriäinen*, Finn.

♂ *ad.* (Finland). Upper parts generally black with narrow greyish yellow or rufous yellowish margins to the feathers, the crown and nape darker; a whitish line over the eye to the nape; rump, upper tail-coverts, and middle elongated tail-feathers nearly all black, the lateral tail-feathers grey edged with white; secondaries and wing-coverts narrowly edged with dull white; under parts white, the neck, throat, and flanks spotted with blackish brown; bill blackish and green; legs yellowish grey, the toes and joints plumbeous grey; iris dark brown. Culmen 1·3, beak very broad, wing 4·1, tail 1·6, tarsus 0·88. Sexes alike. The adult in winter has the upper parts brownish ashy, the centre of the feathers darker; rump feathers black with paler margins; wings and tail paler than in summer; under parts white, the throat marked with small blackish grey striations.

Hab. Northern Europe, chiefly in the eastern portions, breeding within the Arctic Circle, and migrating south in winter to Southern Europe and even North Africa; a rare straggler to Britain; Asia east to Western Siberia.

Differs from the Sandpipers chiefly in affecting at all seasons of the year fresh water and marshes and not the sea coast, and on passage it is not met with in large flocks. On the wing it behaves much like a Snipe, but when on the ground it skulks, unlike the Sandpipers. It is a rather silent bird, and I have never heard its note, which is described as *too-who*, rapidly repeated. Its food consists of insects of various kinds and larvæ. It breeds in June in the large marshes of Dovrefjeld and in Lapland, but not west of the Luleå Valley nor in Finmark, in open soft places, the nest being a neatly rounded hollow, lined with a few grass-bents. The eggs, 4 in number, vary considerably; the ground-colour is lighter or darker stone-buff, the shell-markings sparse and faint purplish grey, and the surface-markings dark umber-brown or umber-red, some eggs having these so profuse as to appear uniform coffee-red or dark coffee-brown; in size they vary from 1·22 by 0·85 to 1·25 by 0·93.

1060. SUBSP. LIMICOLA SIBIRICA.

Limicola sibirica, Dresser, P.Z.S. 1876, p. 674; Bogd. Consp. Av. Imp. Ross. p. 101; Tacz. F. O. Sib. O. p. 924; *L. platyrhyncha* (nec. Temm.), David and Oust. Ois. Chine, p. 470; Seebohm, B. Jap. Emp. p. 337; Sharpe, Cat. B. Br. Mus. xxiv. p. 612, partim.

♂ *ad.* (E. Siberia). Differs from *L. platyrhyncha* in having the upper parts more rufous, not so black, the feathers with tolerably broad pale margins. In winter dress similar to *L. platyrhyncha.*

Hab. The Southern Baikal, the shores of the Sea of Ochotsk; Japan and China in winter.

This is merely an eastern race of our common Broad-billed Sandpiper, and does not differ from it in habits. Its nest and eggs are as yet unknown.

TRINGA, Linn., 1766.

1061. PECTORAL SANDPIPER.

TRINGA MACULATA.

Tringa maculata, Vieill. Nouv. Dict. xxxiv. p. 465 (1819); Dresser, viii. p. 11, pl. 546; (Sharpe), Cat. B. Br. Mus. xxiv. p. 562; Ridgway, p. 156; Saunders, p. 579; Lilford, v. pp. 76, 78, pls. 31, 32; Poynting, p. 135, pl. 29; *T. pectoralis* (Say), in Longs. Exp. i. p. 171 (1823); Gould, B. of E. iv. pl. 327; id. B. of Gt. Brit. iv. pl. 67; Audub. B. Am. 8vo ed., v. p. 259, pl. 329.

♂ *ad.* (N. America). Crown and upper parts blackish brown with greyish and ochreous buff margins, the rump blackish; middle tail-feathers blackish, narrowly margined with ochreous brown, the rest dusky cinereous tipped with white; primaries blackish, the shaft of the first one white; wing-coverts blackish grey with pale grey margins; chin white; sides of head, neck, upper breast, and flanks greyish, clearly striped with blackish brown, the last washed with pale buff; bill greenish black, light olive-green at base; legs clay-yellow; iris dark brown. Culmen 1·2, wing 5·0, tail 2·3, tarsus 1·1 inch. Sexes alike. In autumn the feathers on the upper parts are more uniform, the lighter markings less buffy, and the black less distinct, the throat and breast whiter and less distinctly striped.

Hab. Arctic and subarctic North America in summer, migrating south to the West Indies and South America for the winter; Greenland; of accidental occurrence in Great Britain.

Frequents damp localities, meadow-land and marshes, and on migration is not found in flocks but singly or in pairs, and when flushed rises like a Snipe, uttering a sharp cry. Like its allies it feeds on coleoptera larvæ, small aquatic insects, and also on some species of seaweed. In the spring the male inflates its throat to more than double the natural size, and utters a deep, hollow, resonant, but musical note, *tōō-ŭ, tōō-ŭ*, many times repeated, this note or song being uttered both when on the wing and on the ground. It breeds in Arctic America on the ground, usually in a tuft of grass, and in June deposits 4 eggs, which are drab, sometimes with a greenish tinge, spotted and blotched with umber-brown, and measure about 1·49 by 1·07.

1062. SHARP-TAILED SANDPIPER.

TRINGA ACUMINATA.

Tringa acuminata (Horst.), Trans. Linn. Soc. xiii. p. 192 (1821); David and Oust. Ois. Chine, p. 470; Seebohm, B. Jap. Emp. p. 339; Dresser, ix. p. 363, pl. 712; (Sharpe), Cat. B. Br. Mus. xxiv. p. 566; Tacz. F. O. Sib. O. p. 908; Saunders, p. 580; Ridgway, p. 155; Nelson, Nat. Hist. Alaska, p. 106, pl. vii.; *T. australis* (nec. Gmel.), Gould, B. of Austral. vi. pl. 30.

♂ *ad.* (China). Crown rusty red striped with black; upper parts more rufous than *T. maculata*; shafts of quills all white for a portion of their length; tail-feathers blackish margined with white, the middle ones elongated and rufous margined, all the feathers pointed; a streak over the eye white spotted with black; under parts white, the throat and breast spotted with black; the breast and flanks washed with rufous; the rest of the under parts with squamate black markings; bill olivaceous at the base, otherwise blackish brown; legs yellowish olive; iris hazel-brown. Culmen 1·25, wing 5·3, tail 2·15, tarsus 1·2 inch. Sexes alike. In winter the crown is rusty, the rest of upper parts greyish brown streaked with dusky; superciliary stripe and under parts white; breast greyish buff with indistinct dusky streaks. The young bird resembles the adult in winter but is darker above.

Hab. Kamchatka and Alaska; Eastern Siberia; Japan in winter and south to the Pelew, Sunda, and Molucca Islands, New Guinea, New Ireland, the Friendly Islands, Australia and New Zealand; has occurred twice in England.

In habits it resembles *T. maculata*, with which species it often associates. Its note, when taking wing, is said to be a soft metallic *pleep, pleep.* It doubtless breeds in North-eastern Siberia, but its nest and eggs are unknown.

1063. BAIRD'S SANDPIPER.

TRINGA BAIRDI.

Tringa bairdi (Coues), Proc. Acad. Nat. Sc. Philad. 1861, p. 194; (Sharpe), Cat. B. Br. Mus. xxiv. p. 570; Ridgway, p. 157; Tacz. F. O. Sib. O. p. 922.

♂ *ad.* (N. America). Upper parts generally blackish margined with sandy and rufous buff; the crown greyish buff streaked with brownish black; the rump and upper tail-coverts black, marked with warm sandy buff, the lateral coverts white, banded with dusky brown; tail greyish brown, the middle feathers rather darker and longer; under parts white, the throat, breast, and flanks washed with buff and finely striped with brown; bill black; legs and feet slaty black; iris brown. Culmen 1·0, wing 4·7, tail 2·2, tarsus 0·95 inch. In winter the upper parts are greyish brown with dusky mesial streaks. The young bird has the dorsal feathers narrowly margined with dull white, and the streaks on the throat are less clearly defined.

Hab. America generally, breeding in the high north and migrating for the winter down to Chili and Argentina; the Chukche Peninsula, N. Siberia; has occurred in Damaraland, and once in England.

In general habits it does not differ from its allies, but is said to be generally seen solitary or in pairs. It breeds late in June, the nest being a depression in the ground, scantily lined, and well hidden in the grass. The 4 eggs are light creamy buff, sometimes tinged with rusty, thickly speckled and spotted with deep reddish brown or chestnut, and measure about 1·30 by 0·93.

1064. BONAPARTE'S SANDPIPER.

TRINGA FUSCICOLLIS.

Tringa fuscicollis, Vieill. Nouv. Dict. xxxiv. p. 461 (1819); Dresser, viii. p. 15, pl. 547; (Sharpe), Cat. B. Br. Mus. xxiv. p. 574; Ridgway, p. 157; Saunders, p. 581; Poynting, p. 141, pl. 30; Lilford, v. p. 80, pl. 33; *T. bonapartii*, Schlegel, Rev. Crit. p. lxxxix. (1844); Gould, B. of Gt. Brit. iv. pl. 71.

♂ *ad.* (Wisconsin). Differs from its near allies in having the upper tail-coverts white; upper parts brownish grey marked with ochraceous and rusty reddish, and striped with black; under parts white; lower throat, breast, and flanks clearly spotted with blackish brown; bill blackish, at base dull green; legs dusky greenish; iris blackish brown. Culmen 1·1, wing 4·7, tail 1·8, tarsus 1·0 inch. Sexes alike. In winter the upper parts are dull greyish brown, with darker streaks, and the markings on the breast are less distinct. The young bird has the upper parts with whitish margins, and the neck and breast washed with greyish buff, the markings ill-defined.

Hab. Eastern North America, breeding far north, and in winter passing through the West Indies and Eastern South America to the Falkland Islands; of accidental occurrence in Britain.

In habits it does not differ from its allies, and is generally to be found in marshy places near the coast. It breeds in Arctic

America near Franklin Bay, its nest being a shallow cavity in the ground lined with a few decayed leaves, and late in June or early in July it deposits 4 eggs, which are rufous drab, boldly marked with dark sepia-brown or blackish brown, those at the larger end being almost confluent; in size they measure 1·35 by 0·95.

1065. Dunlin.

TRINGA ALPINA.

Tringa alpina, Linn. Syst. Nat. i. p. 249 (1766); Naum. vii. p. 426, Taf. 186; Dresser, viii. p. 21, pl. 548; (Sharpe), Cat. B. Br. Mus. xxiv. p. 602; Saunders, p. 583; Lilford, v. p. 81, pl. 34; Blanf. F. Brit. Ind. Birds, iv. p. 279; *T. variabilis*, Meyer, Ann. Wetteran. Gesellsch. i. p. 275 (1809); Hewitson, ii. p. 364, pl. cii.; *T. cinclus*, Linn. tom. cit. p. 251; *T. schinzii* (Brehm), Vög. Deutschl. p. 663 (1831); Naum. vii. p. 453, Taf. 187.

Bécasseau variable, French; *Churrilla*, Span.; *Piovanello pancia nera*, Ital.; *Alpen-Strandläufer*, German; *Strandbockje* Dutch; *Louthrœll*, Icel.; *Almindelig-Ryle*, Dan.; *Foranderlig-Strandvibe*, Norweg.; *Kärrsnäppa*, Swed.; *Suo-sirriäinen*, Finn.; *Pestrosoboy-pessotchnik*, Russ.

♂ *ad.* (England). Crown and upper parts generally black, varied with rusty red or yellowish red; nape, sides and back of neck white, streaked with blackish grey; rump and upper tail-coverts black with greyish margins; middle tail-feathers blackish grey, elongated, the rest dull ashy grey; a whitish stripe over the eye; chin white; throat and upper breast white, broadly striped with black; a broad black patch on the lower breast; rest of under parts white; bill and legs black; iris dark brown. Culmen 1·3, wing 4·4, tail 2·0, tarsus 1·0 inch. Female similar, but as a rule larger. In winter the head and upper parts are dull ashy grey, the feathers with darker centres; rump and upper tail-coverts black, margined with grey; under parts white, the lower throat and sides of neck striated with brownish.

Hab. Europe north to Novaya Zemlya and the Arctic coasts, but not Spitsbergen, breeding as far south as Britain and Denmark; in winter migrating to Southern Europe, and Africa as far south as Zanzibar; the Canaries; Asia east to India; accidental in W. North America.

Frequents the coasts, estuaries, and flats left bare by the tide, and less often the shores of inland lakes and morasses; in winter and when on passage in flocks consorting with other waders, and feeding on marine worms, crustaceans, and insects of various kinds. Its flight is swift and strong, and its call-note is a clear whistle. It breeds from the latter part of April to the middle of June, the 4 eggs being deposited in a depression in the ground sparingly lined with grass-bents, usually near the sea in some grass-covered swampy place. The eggs vary in ground-colour from pale greenish grey to pale stone-colour or dark stone-buff, and are usually marked with purplish grey shell blotches and dark brown surface spots and blotches; in size they measure about 1·29 by 0·94.

1066. SUBSP. TRINGA AMERICANA.

Tringa americana (C. L. Brehm), Vogelfang, p. 317 (1855); Cassin, B. N. Am. p. 719; Sharpe, Cat. B. Br. Mus. xxiv. p. 608; *T. alpina* (nec. Linn.), Seebohm, B. Jap. Emp. p. 334; *T. pacifica* (Coues), P. Acad. N. S. Phil. 1861, p. 89; Tacz. F. O. Sib. O. p. 897; Ridgway, p. 160.

♂ *ad.* Differs from *T. alpina* in being larger and more brightly coloured, the chin and upper throat pure white, contrasting conspicuously with the black on the lower breast. Culmen 1·7, wing 4·75, tail 2·25, tarsus 1·1 inch.

Hab. North America generally; the West Indies in winter; Eastern Siberia north to Kamchatka, south to Japan, Corea, and China, west to the Boganida.

Is merely a climatic form of our European Dunlin, and does not differ from it in habits, food, or nidification.

1067. LITTLE STINT.

TRINGA MINUTA.

Tringa minuta, Leisl. Nachtrag zu Bechst. Naturg. Deutschl. i. p. 74 (1811); Naum. vii. p. 391, Taf. 184; Gould, B. of E. iv. p. 332; (id.), B. of Gt. Brit. iv. pl. 72; Dresser, viii. p. 29, pls. 549, 550 fig. 1, 552 fig. 1; (Sharpe), Cat. B. Br. Mus. xxiv. p. 538; Tacz. F. O. Sib. O. p. 918; Blanf. F. Brit. Ind. Birds, iv. p. 273; Saunders, p. 585; Lilford, v. p. 86, pl. 35; Poynting, p. 149, pls. 32, 33.

Bécasseau minute, French; *Churrilla minuta*, Span.; *Gambeccio*, Ital.; *Kleiner Strandläufer*, German; *Kleine Strandlooper*, Dutch; *Dværgryle*, Dan.; *Liden Strandvibe*, Norweg.; *Småsnäppa*, Swed.; *Pikku-sirriäinen*, Finn.; *Chota-pau-lopa*, Hindu.

♂ *ad.* (Spain). Forehead and cheeks white; feathers in front of the eye, ear-coverts, and sides of neck rufous mottled with black, and slightly with grey; upper parts generally black, broadly margined with rufous, and to some extent with whitish; quills dark greyish brown, primary shafts chiefly white ; wing-coverts tipped with white ; upper tail-coverts and middle tail-feathers black, the former slightly marked, the latter margined with rufous, rest of tail pale ashy with narrow white margins ; under parts white, the fore neck and breast tinged with rufous, and with specks of dark brown ; bill and feet black ; iris brown. Culmen 0·7, wing 3·7, tail 1·7, tarsus 0·75, middle toe 0·75. Sexes alike. In winter the upper parts are greyish brown with blackish centres to the feathers, the rufous tinge lacking in the plumage ; under parts white ; the sides of the upper breast brownish. The young bird has the upper parts blackish, with rufous and whitish margins, the under parts white, the breast tinged with buff and unspotted.

Hab. Northern Europe, breeding in the eastern and high northern portion, migrating for the winter as far as South Africa; Northern Asia, east to Lake Baikal, south in winter to India and Ceylon.

Frequents on passage and in winter the sea coasts, river banks, marshes and mud-flats, and is then usually seen in small flocks and consorting with other waders. Its flight is swift but irregular, and its note, *drrr, drrrt, drrrt,* is often uttered when on the wing. Its food consists of aquatic insects, worms, small crustacea, and occasionally seeds of shore-plants. It breeds from Northern Russia to the Taimyr Peninsula, the nest being a mere depression or cup in the ground near the tide-mark, scantily lined with dried leaves or grass, and the 4 eggs, which are deposited in June or July, are miniatures of Dunlins' eggs, and measure about 1·12 by 0·80.

1068. EASTERN LITTLE STINT.

TRINGA RUFICOLLIS.

Tringa ruficollis, Pallas, Reis. Russ. Reichs. iii. p. 700 (1776) ; David and Oust. Ois. Chine, p. 472 ; (Sharpe), Cat. B. Br. Mus. xxiv. p. 545 ; Blanf. F. Brit. Ind. Birds, iv. p. 274 ; Tacz. F. O. Sib. O. p. 920 ; *T. damacensis*, Horsf. Tr. Linn. Soc. xiii. p. 192 (1821) ; *T. albescens*, Temm. Pl. Col. v. pl. 41 (1823) ; Gould, B. of Austr. vi. pl. 31.

♂ *ad.* (E. Siberia). Differs from *T. minuta* in being somewhat larger, and in having the sides of the face and neck, the throat and chest bright rufous, the chin alone whitish ; bill and legs black ; iris nearly black. Culmen 0·7, wing 4·0, tail 1·85, tarsus 0·7, middle toe 0·7 inch. Female similar but with less rufous in the plumage. In winter plumage this species is undistinguishable from *T. minuta*.

Hab. North-eastern Siberia from the Taimyr to Kamchatka, migrating south for the winter through Dauria and Mongolia, to Japan, China, Burma, India, the Malay Archipelago, and Australia.

In general habits it does not differ from *T. minuta.* It doubtless breeds on the shores of the Arctic Ocean in North-east Siberia, but its nest and eggs are as yet unknown.

1069. LONG-TOED STINT.

TRINGA SUBMINUTA.

Tringa subminuta, Middendorf, Sib. Reise, ii. pt. 2, p. 222, Tab. xix. fig. 6 (1851); Seebohm, B. Jap. Emp. p. 338; Tacz. F. O. Sib. O. p. 914; Blanf. F. Brit. Ind. Birds, iv. p. 275; *T. damacensis* (nec. Horsf.), (Sharpe), Cat. B. Br. Mus. xxiv. p. 553; Ridgway, p. 158.

♂ *ad.* (E. Siberia). Resembles *T. minuta* in plumage, but differs in having a much longer middle toe, in only the first primary having a white shaft, and in the colour of the soft parts; beak olive-brown, becoming black towards the end; legs olivaceous yellow, darker on the joints; iris dark brown. Culmen 0·75, wing 3·7, tail 1·55, tarsus 0·82, middle toe 0·9 inch. Sexes alike.

Hab. Eastern and North-eastern Siberia, west to the Altai; Kamchatka; accidental in Alaska; on migration and in winter in Japan, the Kurile Islands, Corea, China, and the Indo-Malayan Islands to Australia.

In habits it does not differ from its allies. It is said to breed on Bering Island and Saghalien, but its eggs are as yet unknown.

1070. AMERICAN STINT.

TRINGA MINUTILLA.

Tringa minutilla, Vieill. Nouv. Dict. xxxiv. p. 466 (1819); Dresser, viii. p. 51, pl. 552, figs. 2, 3; (Sharpe), Cat. B. Br. Mus. xxiv. p. 548; Ridgway, p. 158; Saunders, p. 587; Lilford, v. p. 90, pl. 37; Poynting, p. 155, pl. 34.

♂ *ad.* (N. America). Differs from *T. minuta* in being smaller, in having the upper parts blacker, less marked with rufous, the hind neck more ashy; rump and upper tail-coverts brownish black, the outermost feathers of the latter partly white; the first quill only with the shaft white; greater wing-coverts margined with whitish; throat white; fore neck and chest ashy, streaked with brown; rest of under parts white; bill blackish brown; legs yellowish brown; iris dark brown. Culmen 0·75, wing 3·35, tail 1·5, tarsus 0·72, middle toe and claw 0·75 inch. Sexes alike. In winter the upper parts are dull ashy grey, streaked with brownish, the breast greyish, with indistinct darker streaks, the rest of the under parts white.

Hab. Arctic and subarctic America in summer, migrating south for the winter to South America; of accidental occurrence in the south-west of England, where it has been thrice obtained.

In habits and food it does not differ from its European congeners, and frequents also similar localities. It breeds in Arctic America and as far south as Labrador, the nest being a mere depression in the ground, lined with a few dried leaves and grass-bents, and the 4 eggs, which are laid late in June or early in July, vary in ground-colour from light drab to pale brownish, and the markings are sepia-brown or chestnut-brown, and are, as a rule, more numerous at the larger end. In size they measure about 1·10 by 0·81.

1071. TEMMINCK'S STINT.

TRINGA TEMMINCKI.

Tringa temmincki, Leisl. Nachtrag zu Bechst. Naturg. Deutschl. i. p. 64 (1811); Naum. vii. p. 483, Taf. 189; Hewitson, ii. p. 362, pl. ci.; Gould, B. of E. iv. pl. 333; (id.), B. of Gt. Brit. iv. pl. 73; Dresser, viii. p. 45, pls. 550 fig. 2, 551; (Sharpe), Cat. B. Br. Mus. xxiv. p. 555; David and Oust. Ois. Chine, p. 473; Blanf. F. Brit. Ind. Birds, iv. p. 275; Tacz. F. O. Sib. O. p. 916; Saunders, p. 589; Lilford, v. p. 87, pl. 36; Poynting, p. 159, pl. 35.

Bécasseau Temminck, French; *Terretita*, Span.; *Gambecchio nano*, Ital.; *Temmincks Strandläufer*, German; *Kleinste Strandlooper*, Dutch; *Temmincks Ryle*, Dan.; *Temmincks Strandvibe* Norweg.; *Mosnäppa*, Swed.; *Cirhi*, Lapp.; *Kangas-sirriäinen*, *Pieni-Sippi*, Finn.

♂ *ad.* (Finland). Upper parts greyish brown, the feathers with blackish centres and edged with greyish rufous or greyish brown; quills blackish brown, only the first with the shaft white; large wing-coverts tipped with white; middle tail-feathers dark brown, slightly elongated, the rest chiefly white, the outermost entirely so; sides of head greyish; a whitish stripe over the eye; fore breast ashy grey, with a warm ochreous tinge, slightly dark mottled; rest of under parts white; bill blackish; legs light brown; iris dark brown. Culmen 0·7, wing 3·75, tail 1·9, tarsus 0·65 inch. Sexes alike. In winter the upper parts are greyish brown with narrow darker shaft stripes, the under parts white, the breast pale brownish grey.

Hab. Northern Europe; passing south for the winter to North Africa; Northern Asia in summer, passing through Mongolia to China and India for the winter.

Frequents the sea coast and marshes near the sea, but during the breeding season it is often found on inland marshes and the shores of inland lakes. In general habits it resembles *T. minuta*, and its food consists of small worms, insects, &c. Its call-note is a shrill *Tirrii*, and in the breeding season it indulges in a peculiar butterfly-like flight, at the same time uttering a peculiar churring sound, which may also be heard when the bird is sitting on some elevated perch. The nest, which is frequently placed near water, is a deep cup-shaped depression in the soil, usually amongst grass, scantily lined with grass-bents. The eggs, 4 in number, are usually deposited in June, and are pale stone-colour or greenish grey, with purplish brown shell-markings, and dark reddish brown surface spots and blotches, which are often collected round the larger end; in size they average 1·10 by 0·79.

1072. PIGMY CURLEW.

TRINGA SUBARQUATA.

Tringa subarquata (Güld), Nov. Comm. Petrop. xix. p. 471, Tab. xviii. (1775); Naum. vii. p. 408, Taf. 185; Gould, B. of E. iv. pl. 328; (id.), B. of Gt. Brit. iv. pl. 68; Audub. B. Am. pl. 263; Dresser, viii. p. 59, pl. 558; David and Oust, Ois. Chine, p. 472; (Sharpe), Cat. B. Br. Mus. xxiv. p. 587; (Tacz.), F. O. Sib. O. p. 925; Blanf. F. Brit. Ind. Birds, iv. p. 278; Saunders, p. 591; Lilford, v. p. 91, pl. 38; Newton, P.Z.S. 1897, p. 890, pl. li. (eggs); "*Tr. ferruginea*, Brünn." Ridgway, p. 160.

Bécasseau cocorli, French; *Churra, Siseta-rocha*, Span.; *Piovanello*, Ital.; *Bogenschnäbliger-Strandläufer*, German; *Krombek-Strandlooper*, Dutch; *Krumnæbet-Ryle*, Dan.; *Krumnæbet Strandvibe*, Norweg.; *Spofsnäppa*, Swed.; *Pitkänokka-sirriäinen*, Finn.

♂ *ad.* (Spain). General colour of plumage rich rusty or fox-red, the feathers on the upper parts marked with black, and some margined with greyish white; quills brownish black; wing-coverts dull ashy with pale margins; rump dark grey; upper and under tail-coverts white, slightly barred with blackish; tail grey with paler margins; bill and legs greenish black; iris dark brown. Culmen 1·5, wing 4·88, tail 2·35, tarsus 1·5 inch. Sexes alike. In winter the rust-red is absent, the upper parts being dull grey with indistinct darker stripes, the under parts white, the sides of the head and throat pencilled with dark grey.

Hab. The extreme northern parts of Asia in summer, at other seasons most parts of Europe, the whole of Africa and Madagascar, Asia south through India and China to Australia; of occasional occurrence in Western N. America and Alaska.

Frequents the sea shore, sandy places, mud-flats, &c., together with other Sandpipers, often in large flocks, and in general habits is very similar to the Dunlin, but its call-note differs. It is only recently that its nest and eggs have been known, Mr. H. L. Popham having found it breeding at the mouth of the Yenesei River in Northern Siberia. The nest was a rather deep hollow in the reindeer moss on a low ridge of ground, somewhat drier than the surrounding swampy tundra, and contained 4 eggs, which resemble those of *Gallinago cœlestis* except in size, as they measure only 1·47 to 1·40 by 1·02 to 1.

˙1073. KNOT.

TRINGA CANUTUS.

Tringa canutus, Linn. Syst. Nat. i. p. 251 (1766); Gould, B. of E. iv. pl. 324; id. B. of Gt. Brit. iv. pl. 65; Dresser, viii. p. 77, pls. 555, 556; David and Oust. Ois. Chine, p. 469; Seebohm, B. Jap. Emp. p. 333; Sharpe, Cat. B. Br. Mus. xxiv. p. 593; Tacz. F. O. Sib. O. p. 894; Ridgway, p. 153; Saunders, p. 595; Lilford, v. p. 95, pls. 40, 41; *T. islandica,* Linn. Syst. Nat. i. pt. ii. add. (1767); Naum. vii. p. 372, Taf. 183.

Bécasseau maubèche, French; *Churra,* Span.; *Piovanello maggiore,* Ital.; *Rostrother Strandläufer,* German; *Kanoet-Strandlooper,* Dutch; *Randbrystingr,* Icel.; *Islandsk-Ryle,* Dan.; *Stor-Strandvibe,* Norweg.; *Kustsnäppa,* Swed.; *Ranta-sirriäinen,* Finn.

♂ *ad.* (Spain). Crown, nape, and hind neck light rust-red and white striped with black; upper parts black, strongly marked with rufous and with white edges; rump and upper tail-coverts white, barred with black and tinged with rufous; primaries blackish, secondaries and wing-coverts dark grey, most tipped with white; tail grey, narrowly margined with white; throat, neck, and under parts rust-red, middle of abdomen and tail-coverts white, the latter with narrow black stripes; bill and legs blackish; iris dark brown. Culmen 1·5, wing 6·7, tail 2·6, tarsus 1·25 inch. Sexes alike. In winter there is no red in the plumage, the upper parts being greyish ash, with faint dark stripes; under parts white, the throat, sides of neck, breast, and flanks slightly striped and marked with dull ashy grey.

Hab. The extreme north of the Old World in summer, passing through Europe to South Africa, Asia to Australia, and North America to Brazil for the winter; Japan, but not found in India in winter.

Is usually met with in small flocks on our coasts, where it frequents the sea shore, mud-flats, and sand-banks, feeding on small crustaceans, mollusca, worms, aquatic insects, &c. It is known to breed in Grinnell Land, the Melville Peninsula, and the Parry Islands, and the young in down have been obtained, but the only authentic egg known is said to be a specimen in the Smithsonian Museum at Washington.

1074. EASTERN KNOT.

TRINGA CRASSIROSTRIS.

Tringa crassirostris, Temm. and Schlegel, Faun. Jap. Aves, p. 107, pl. 64 (1847); David and Oust. Ois. Chine, p. 468; Seebohm, B. Jap. Emp. p. 332; Sharpe, Cat. B. Br. Mus. xxiv. p. 600; Tacz. F. O. Sib. O. p. 894; Blanf. F. Brit. Ind. Birds, iv. p. 277; *Schœniclus magnus*, Gould, B. Austr. vi. pl. 33.

♂ *ad.* (Kurile Isl.) Head and neck white closely striped with black; back black very narrowly margined here and there with grey; scapulars black with broad subterminal chestnut bands; rump greyish; tail-coverts white, the upper closely, the under tail-coverts sparingly spotted with black; tail brownish grey; quills blackish, the inner secondaries and wing-coverts dull ashy with white margins; breast almost black; rest of under parts white, the lower breast and upper flanks spotted with black; bill brown; legs grey; iris dark brown. Culmen 1·9, wing 7·0, tail 2·6, tarsus 1·35 inch. In winter the upper parts are pale brownish grey with whitish margins; no red in the plumage, tail-coverts sparingly spotted with black; under parts white, the neck striped, the breast and flanks faintly spotted with greyish brown.

Hab. Eastern Siberia, migrating south through Mongolia, Japan, and China to Burma, India, the Malay Archipelago, and Australia for the winter.

In general habits this species does not appear to differ from the Knot. Its nest and eggs are unknown.

1075. PURPLE SANDPIPER.

TRINGA STRIATA.

Tringa striata, Linn. Syst. Nat. i. p. 248 (1766), id. Add.; Dresser, viii. p. 69, pl. 554; Saunders, p. 593; Lilford, v. p. 93, pl. 39; Poynting, p. 167, pl. 36; *T. maritima*, Gmel. Syst. Nat. i. p. 678 (1788); Naum. vii. p. 467, Taf. 188; Gould, B. of E. iv. pl. 334; (id.), B. of Gt. Brit. iv. pl. 74; Hewitson, ii. p. 366, pl. ciii; (Sharpe), Cat. B. Br. Mus. xxiv. p. 278; Ridgway, p. 153; Tacz. F. O. Sib. O. p. 902.

Bécasseau violet, French ; *Churrilla, Siseta*, Span. ; *Piovanello violetto*, Ital. ; *See-Strandläufer*, German ; *Paarse-Strandlooper*, Dutch ; *Selningr*, Icel. ; *Fjærepist*, Norweg. ; *Vintersneppe*, Dan. ; *Skärsnäppa*, Swed. ; *Gadde-birus*, Lapp. ; *Meri-sirriäinen*, Finn. ; *Pesoschnik-morskoi*, Russ.

♂ *ad.* (Greenland). Crown and nape black striped with white and ochreous ; sides of head dull white striped with blackish ; upper parts black glossed with purple ; the mantle-feathers margined with white and reddish ochreous ; the rump and middle tail-feathers uniform purplish black, rest of the tail-feathers blackish grey ; quills blackish, the shafts white, the outer secondaries tipped with, and the inner ones chiefly, white ; throat white striped with blackish grey ; under parts white, the flanks marked, and under tail-coverts striped with blackish grey ; bill ochreous at base, otherwise dark brown ; legs ochreous, iris brown. Culmen 1·15, wing 4·7, tail 2·4, tarsus 0·9 inch. Sexes alike. In winter the head and neck are sooty blackish faintly tinged with purple, the upper parts purplish black, the mantle-feathers with narrow greyish margins : chin and under parts below the breast white, the flanks spotted with blackish grey.

Hab. Northern Europe, north to the North Cape, Iceland, Greenland, and Spitsbergen, migrating south to the Mediterranean in winter ; North America, breeding far north, and in winter found south to the Middle United States ; has been met with in North Asia as far east as the shores of the Taimyr Peninsula.

Is essentially a maritime bird, frequenting rocky places on the sea coast, and is seldom met away from the sea except during the breeding season, and even then it nests not far away. Its food consists of marine insects, mollusca, and sometimes seeds of shore-plants. It swims with ease, and I have known a bird to dive when wounded and pursued. The nest is a mere depression in the ground, and the 4 eggs, which are deposited from the middle of May to the early part of June, vary in ground-colour from sea-green and greenish grey to stone-buff, and are marked with purplish grey underlying, and dark reddish brown surface spots and blotches, which are usually more numerous at the larger end. In size they measure about 1·40 by 1·0.

1076. SUBSP. TRINGA COUESI.

Tringa couesi (Ridgway), Bull. Nutt. Orn. Club, v. p. 160 (1880) ; Nelson, Rep. Nat. Hist. Alaska, p. 103, pl. vi. ; Ridgway, p. 154 ; (Sharpe), Cat. B. Br. Mus. xxiv. p. 583 ; Tacz. F. O. Sib. O. p. 905.

♂ *ad.* Differs from *T. maritima* in having the bill shorter, the upper parts more richly marked with rusty red, the breast more marked with blackish, with more or less of a black patch on each side. Culmen 1·0, wing 5·1, tail 1·9, tarsus 0·91 inch. In winter the plumage is like that of *T. maritima.*

Hab. N.E. Siberia, the Chukchi Peninsula, the Kuriles and Aleutian Isles; Kamchatka; Alaska.

Is an eastern representative of *T. maritima,* and does not differ from that species in its general habits. Its eggs are described as being pale olive-buff, varying to light brownish buff, spotted longitudinally and somewhat spirally with vandyke-brown or deep umber, and measure about 1·46 by 1·00.

1077. WESTERN SEMIPALMATED SANDPIPER.

TRINGA OCCIDENTALIS.

Tringa occidentalis (Lawr.), Proc. Acad. N. S. Philad. 1864, p. 107; (Tacz.), F. O. Sib. O. p. 890; (Turner), Nat. Hist. Alaska, p. 148; (Nelson), Rep. Nat. Hist. Alaska, p. 113; (Ridgway), p. 162; *Ereunetes pusillus,* Sharpe, Cat. B. Br. Mus. xxiv. p. 514, partim; *E. petrificatus,* Illiger, Prodr. p. 262 (1811 partim); *T. semipalmata,* Wilson, Am. Orn. viii. p. 131 (1813 partim).

♂ *ad.* (Alaska). Crown and upper parts black varied with rusty red and cinnamon-buff; the rump and upper tail-coverts nearly uniform blackish except on the sides, which are white; quills blackish, the first with a white shaft; wing-coverts tipped with white; under parts white, the sides of head and throat, and the breast and flanks tolerably boldly streaked and spotted with blackish; bill greenish olive at the base, otherwise black; legs and feet greenish olive; iris dark brown. Culmen 1·0, wing 3·9, tail 1·8, tarsus 0·95 inch. In winter the upper parts are brownish grey, the crown paler, streaked narrowly with black; under parts white, the breast, sides of neck, and flanks narrowly streaked with dusky grey.

Hab. Western North America, breeding north to the shores of Norton Sound, Alaska, where it is very common; the Aleutian Islands. On the Asiatic coasts it has been met with on the Chukchi Peninsula in N.E. Siberia; on passage and in winter it is common on the Pacific coasts to South America, and is said also to occur on the Atlantic coasts.

This, the western representative of the semipalmated Sandpiper (*T. pusilla,* Linn.), does not differ from that species in habits. Its call-note is described as being a peeping trill. It arrives at its breeding place in May, and nests in June, the nest being a mere depression in the moss or grass, scantily lined with a few feathers. Its eggs, usually 4, but sometimes 5, in number, are described as being deep cinnamon-buff, sprinkled, speckled, or thickly spotted with bright rusty brown or chestnut, and measure about 1·24 by 0·87.

CALIDRIS, Cuvier, 1800.

1078. SANDERLING.

CALIDRIS ARENARIA.

Calidris arenaria (Linn.), Syst. Nat. i. p. 251 (1766); Audubon, B. of Am. p. 230; Naum. vii. p. 353, Taf. 182; Gould, B. of E. iv. pl. 335; id. B. of Gt. Brit. iv. pl. 66; Newton, P.Z.S. 1871, pl. iv. fig. 2 (egg); Dresser, viii. p. 101, pls. 559, 560; Layard, B. of S. Afr. p. 362; David and Oust. Ois. Chine, p. 467; (Seebohm), B. Jap. Emp. 336; Sharpe, Cat. B. Br. Mus. xxiv. p. 526; Tacz. F. O. Sib. O. p. 841; Blanf. F. Brit. Ind. Birds, iv. p. 270; Ridgway, p. 162; Saunders, p. 597; Lilford, v. p. 97, pl. 42; Poynting, p. 175, pl. 37.

Sanderling variable, French; *Churrilla de tres dedos, Pitillos*, Span.; *Piovanello tredatillo*, Ital.; *Ufer-Sanderling*, German; *Drieteenige-Strandlooper*, Dutch; *Sandlöber*, Norweg. and Dan.; *Sandlöpare*, Swed.; *Hieta-sirriäinen*, Finn.; *Morskoi-Sujok*, Russ.; *Medrouan*, Moor.

♂ *ad.* (England). Crown, nape, and upper parts richly varied black and rusty red; rump dull ashy grey marked with blackish grey; quills blackish; wing-coverts dark ashy grey margined with dull white, and slightly marked with rufous; middle tail-feathers blackish grey, the rest grey, the outermost nearly white; sides of head, throat, and upper breast light rufous marked with black; rest of under parts white; bill and legs blackish; iris dark brown. Culmen 1·15, wing 4·85, tail 2·05, tarsus 1·0 inch; hind-toe wanting. Female similar but less rufous. In winter both sexes have the upper parts light grey with darker stripes and the under parts white, with no rufous in the plumage.

Hab. The high northern portions of the Old and New Worlds; in winter migrating south to South Africa, Burma, India, Ceylon, the Laccadives, China, Japan, Australia, and Chile.

Frequents the sea coast, associating with other Sandpipers, and is by no means shy. It feeds on small marine insects, worms, and crustaceans, and in the summer to some extent on the buds of Arctic plants. Its note is a shrill but not unpleasant *wiek.*

It breeds in Iceland (sometimes), Greenland, and (perhaps) Northern Siberia, the nest being a mere depression on the ground, and in June deposits 4 eggs, which resemble miniature eggs of the Curlew, and measure about 1·44 by 0·95.

EURYNORHYNCHUS, Nilss., 1821.

1079. SPOON-BILLED SANDPIPER.

EURYNORHYNCHUS PYGMÆUS.

Eurynorhynchus pygmæus (Linn.), Syst. Nat. i. p. 231 (1766); Harting, Ibis, 1869, p. 427, pl. xii.; Gould, B. of As. vii. pl. 66; David and Oust. Ois. Chine, p. 474; Tacz. F. O. Sib. O. p. 928; (Seebohm), B. Jap. Emp. p. 338; Blanf. F. Brit. Ind. Birds, iv. p. 271; Ridgway, p. 160; *E. griseus*, Nilss. Orn. Suec. ii. p. 29 (1821).

♂ *ad.* (E. Siberia). Crown and back black margined with rufous and ochreous; wing-coverts and neck paler and greyer; middle of rump and upper tail-coverts, and middle tail-feathers blackish; sides of rump white; tail otherwise grey; quills blackish brown, the shafts white; sides of head, throat, and breast rusty red; rest of under parts and under surface of wings white, the lower breast spotted with black; bill and legs black; iris dark brown. Culmen 0·95, wing 3·9, tail 1·45, tarsus 0·85 inch; bill spatulate. Sexes alike. In winter the plumage is entirely without red; upper parts dusty grey, with white or paler margins; wing-coverts tipped with white; forehead, sides of head, neck, and under parts pure white.

Hab. North-eastern Siberia, migrating south to Japan, the coasts of China, Burma, and rarely those of India; accidental in Alaska.

But little is on record respecting this Sandpiper, which is easily recognizable by its broadly spatulate bill, and it is said to frequent mud-flats in company with other waders. It breeds in Northern Siberia, but its nest and eggs are as yet unknown.

MACHETES, Cuv., 1817.

1080. RUFF.

MACHETES PUGNAX.

Machetes pugnax (Linn.), Syst. Nat. i. p. 247 (1766); Naum. vii. p. 502, Taf. 190, 191, 192, 193; Hewitson, ii. p. 345, pl. xcv.; Gould, B. of E. iv. pl. 325; id. B. of Gt. Brit. iv. pl. 61; Dresser, viii. p. 87, pls. 557, 558; Layard, B. of S. Afr. p. 329; (Seebohm), B. Jap. Emp. p. 327; (Sharpe), Cat. B. Br. Mus. xxiv. p. 500; Tacz. F. O. Sib. O.

p. 885 ; (Blanf.), F. Brit. Ind. Birds, iv. p. 268 ; (Ridgway), p. 168 ; Saunders, p. 601 ; Lilford, v. p. 122, pls. 53, 54 ; Poynting, p. 179, pl. 38.

Combattant, *Paon de Mar*, French ; *Combatiente*, Span. ; *Gambetta*, Ital. ; *Kampfhahn*, German ; *Kamphaan*, Dutch ; *Brushane*, Dan., Norweg., and Swed. ; *Suokukko*, *Suokulainen*, Finn. ; *Toroukhtann*, *Dratschounn*, Russ. ; *Habib-el-tchibib*, Moor. ; *Geh-wala*, Hindu.

♂ *ad.* (N. Russia). Upper parts generally brown, varied with black, warm buff and chestnut ochreous ; sides of rump nearly white ; tail ashy brown varied with black and chestnut-red ; quills blackish brown ; wing-coverts ashy brown ; feathers on the sides of neck and round the breast elongated, forming a conspicuous ruff or cape, white tinged with cream-buff ; breast below the ruff and upper flanks glossy blackish marked with white ; rest of under parts white, the under tail-coverts slightly marked with black ; face covered with warty yellowish tubercles ; bill blackish brown, fleshy at the base ; legs yellowish brown ; iris blackish brown. Culmen 1·68, wing 7·1, tail 2·7, tarsus 2·05 inch. The ruff varies extremely in colour and markings, scarcely any two birds, except those that have it uniform black or white, are alike. The female has the crown, nape, and upper parts sandy brown marked with blackish brown ; wings and tail as in the male ; chin whitish ; throat, breast, and upper flanks ashy brownish marked with darker brown ; rest of under parts white ; no sign of a ruff. In winter the male also lacks the ruff and tubercles on the face, and has the throat and neck as in the female.

Hab. Europe generally, breeding from the North Cape down to Denmark, and rarely in Eastern England ; in winter it passes as far south as the Cape of Good Hope ; in Asia it is found as far north as Kamchatka, south to India, Ceylon, and Borneo ; rarer in the east, but found as far as Japan ; of occasional occurrence in Eastern North America.

Frequents damp marshy localities. The Ruff is a silent bird, but in the spring and during migration the note, a low *kaek, kaek, kick, kack*, may be heard. The Ruff is polygamous, and in the spring the males assemble, or as it is termed "hill," and fight, or rather spar, for the possession of the females or Reeves, which alone undertake the cares of incubation. The nest is on the ground, well hidden, and the eggs, usually 4, but sometimes only 3, in number, are generally laid in May, and are pale olivaceous or stone-buff in ground-colour, richly blotched and marked, chiefly at the larger end, with umber-brown, and a few purplish grey shell spots, and measure about 1·69 by 1·22.

TRINGITES, Cab., 1856.

1081. BUFF-BREASTED SANDPIPER.

TRINGITES RUFESCENS.

Tringites rufescens (Vieill.), Nouv. Dict. xxiv. p. 470 (1819); (Gould), B. of E. iv. pl. 326; id. B. of Gt. Brit. iv. pl. 64; Newton, P.Z.S. 1867, pl. xv. fig. 4 (egg); Dresser, viii. p. 109, pl. 561; Saunders, p. 601; Lilford, v. p. 99, pl. 43; Poynting, p. 183, pl. 39; *T. subruficollis* (Vieill.), tom. cit. p. 465 (1819); Ridgway, p. 169; Sharpe, Cat. B. Br. Mus. xxiv. p. 521.

♂ *ad.* (Mexico). Upper parts clay-buff marked with black, the dorsal feathers tipped with dirty white; quills blackish brown, the elongated inner secondaries metallic blackish brown margined with ochreous; tail brown tinged with metallic grey, with a subterminal blackish band and tipped with buffy white, the outer feathers marbled with blackish; under parts clay-yellow, paler on the abdomen and under tail-coverts, the sides of the breast blotched with black; the under surface of the wing marbled with black; bill greenish black; legs clay-yellow; iris hazel-brown. Culmen 0·9, wing 5·15, tail 2·25, tarsus 1·25 inch. Sexes alike.

Hab. America, breeding in the high north, and migrating south for the winter as far down in South America as Peru and Paraguay; of accidental occurrence in Europe, but has been obtained about a dozen times in England, three times in Ireland, once in Switzerland, and once in Heligoland.

Is chiefly met with inland and not on the coast, and frequents grassy plains and also sandy arid localities. It is tame and unsuspicious, and runs with ease and swiftness; on the wing it most nearly resembles a Ringed Plover. Its call-note is a low, weak *tweet*, and its food consists of insects of various kinds. It breeds in Arctic and subarctic America late in June or early in July, the nest being a mere depression in the ground scantily lined with a few withered leaves and dried grasses, and the eggs, 4 in number, are clay-yellow with an olivaceous or drab tint, or of a peculiar grey in ground-colour, boldly and sharply marked, chiefly at the larger end, with rich umber-brown and with purplish grey underlying shell blotches; in size they measure about 1·46 by 1·05.

BARTRAMIA, Less., 1831.

1082. BARTRAM'S SANDPIPER.

BARTRAMIA LONGICAUDA.

Bartramia longicauda (Bechst.), Kurze Uebers. Latham. p. 453, pl. 184 (1811); (Dresser), viii. p. 119, pl. 562; Sharpe, Cat. B. Br. Mus. xxiv. p. 509; Ridgway, p. 169; Saunders, p. 603; Lilford, v.

p. 101, pl. 44; Poynting, p. 187, pl. 40; *Tringa bartramia*, Wils. Am. Orn. vii. p. 63, pl. 50, fig. 2; (Gould), B. of E. iv. pl. 313; (id.), B. of Gt. Brit. iv. pl. 63; (Naum.), viii. p. 43, Taf. 196.

♂ *ad.* (Wisconsin). Forehead buffy white marked with blackish brown; crown blackish brown and rufous buff with an irregular central buff stripe; hind neck brownish buff and black; back and rump blackish brown, the former with rufous buff margins; upper surface of wings greyish buff barred with blackish brown; tail long, graduated, the middle feathers buffy brown, the rest pale rufous, all barred with black, the latter tipped with white and with a large subterminal black bar; chin and fore face white; neck and breast buffy white, the former striped, the latter margined with black; rest of under parts white, the flanks and under wing-surface barred with black; bill yellowish at base, otherwise blackish; legs clay-yellow; iris dark brown. Culmen 1·4, wing 6·65, tail 3·6, tarsus 1·95. Sexes alike. In winter the upper parts are paler, and the under parts less boldly marked.

Hab. Eastern and Central America, north to the Yukon valley and Nova Scotia, south in winter to Brazil and Peru; of rare and accidental occurrence in Britain, Germany, Holland, Malta, Italy, and has been once recorded from Australia.

Frequents the grass prairies, where it is not seen in flocks, but singly or in pairs. Its call, when it takes wing, is a melodious whistle of three notes. As a rule it is not shy, and will often squat, reminding one of a Stone Curlew. Its food consists chiefly of insects, especially grasshoppers, and it is also known to eat berries. Its flesh is extremely well flavoured, and in the autumn it is very fat. Its nest is a mere hollow in the ground, and the eggs, 4 in number, are usually laid in June, and are pale clay ochreous or creamy drab with numerous purplish grey shell-markings and umber-brown surface spots, and measure about 1·75 by 1·28.

TOTANUS, Bechst., 1803.

1083. REDSHANK.

TOTANUS CALIDRIS.

Totanus calidris (Linn.), Syst. Nat. i. p. 245 (1766); Naum. viii. p. 95, Taf. 199; Hewitson, ii. p. 329, pl. lxxxix.; Gould, B. of E. iv. pl. 310; id. B. of Gt. Brit. iv. pl. 54; Dresser, viii. p. 157, pls. 567 fig. 1, 568 fig. 1, 569 fig. 2; David and Oust. Ois. Chine, p. 464; Seebohm, B. Jap. Emp. p. 320; Sharpe, Cat. B. Br. Mus. xxiv. p. 414; Tacz. F. O. Sib. O. p. 866; Blanf. F. Brit. Ind. Birds, iv. p. 264; Saunders, p. 615; Lilford, v. p. 113, pl. 49; Poynting, p. 217, pl. 46.

Chevalier-Gambetta, French; *Chalretta*, Portug.; *Archibebe*, *Tifort*, Span.; *Pettegola*, Ital.; *Gambett-Wasserläufer*, German; *Turcluur*, Dutch; *Stelkur*, Icel.; *Rödben-Klire*, Dan.; *Rödbenet-sneppe*, Norweg.; *Rödbent-snäppa*, Swed.; *Punajalka-vikla*, Finn.; *Krasnonoshka*, *Nastojaschy-ulit*, Russ.; *Chota-batan*, Hindu.

♂ *ad.* (Finland). Upper parts brown striped with blackish, the elongated secondaries, scapulars, and wing-coverts barred and marked with blackish; quills dark brown, the short secondaries white slightly marked with brown; larger wing-coverts white-tipped; lower back, rump, upper tail-coverts, and outer tail-feathers white, the two last barred with blackish; middle tail-feathers similar but ashy brown instead of white; under parts white, the throat, neck, and breast boldly striped with blackish, the flanks barred and striped, and under tail-coverts slightly barred with blackish; bill dark red at base, otherwise blackish; legs orange-red; iris dark brown. Culmen 2·0, wing 6·4, tail 2·8, tarsus 1·92 inch. Sexes alike. In winter the upper parts are ashy grey, and the under parts are much less striped and marked with blackish than in the summer.

Hab. Europe generally, breeding from Lapland down to the Mediterranean; Africa south to the Cape Colony in winter; the Canaries; Asia, east to Japan, north to nearly 70° N. lat., south on passage and in winter to Mongolia, Corea, China, India, and Ceylon, to the Malay Archipelago.

Frequents the sea shore except during the breeding season, when it is found both on the coast and in damp marshy places more inland. It is shy and wary, and when disturbed flies round uttering its shrill cry. Its flight is swift, but wavering, and it is able to swim with ease, and even dive when wounded. The nest is a cup-shaped depression in the ground, usually in a grass tuft, sometimes in an open situation, and the eggs, which are deposited from early in April to the latter part of May, according to latitude, are 4 in number, clay-buff in ground-colour, marked with purplish brown underlying shell blotches and dark brown surface spots and blotches, some being much bolder marked than others; in size they measure about 1·68 by 1·17.

1084. SPOTTED REDSHANK.

TOTANUS FUSCUS.

Totanus fuscus (Linn.), Syst. Nat. i. p. 243 (1766); Naum. viii. p. 123, Taf. 200; Hewitson, ii. p. 326, pl. lxxxviii.; Gould, B. of E. iv. pl. 309; id. B. of Gt. Brit. iv. pl. 55; Dresser, viii. p. 165, pls. 567 fig. 2, 568 figs. 2, 3, 569 fig. 1; David and Oust. Ois. Chine, p. 463; Seebohm, B. Jap. Emp. p. 319; Sharpe, Cat. B. Br. Mus. xxiv. p. 409;

Tacz. F. O. Sib. O. p. 869; Blanf. F. Brit. Ind. Birds, iv. p. 265; Saunders, p. 617; Lilford, v. p. 118, pl. 51; Poynting, p. 223, pl. 47.

Chevalier brun, French; *Chuit, Andario,* Span.; *Gambetta fosca,* Ital.; *Dunkelfärbiger-Wasserläufer,* German; *Zwarte-Ruiter,* Dutch; *Sortsneppe,* Dan. and Norweg.; *Svartsnäppa,* Swed.; *Rivikt, Cipcastak,* Lapp.; *Mustavikla, Musta-Tjuti, Rivatu,* Finn.; *Polevoipetoushock, Schtschegol,* Russ.; *Batan, Gatni,* Hindu.

♂ *ad.* (N. Russia). Head, neck, and entire under parts sooty black, some of the chin and hind-neck feathers narrowly tipped with white; upper parts sooty black with a slight metallic gloss, and marked with white, giving a spotted appearance; rump white, the upper tail-coverts blackish barred with white; tail black, the middle feathers indistinctly barred with grey, the rest marked and tipped with white; flanks and under tail-coverts barred with white; under wing-surface white slightly marked with grey; bill black, but red at base of lower mandible; legs dark red; iris dark brown. Culmen 2·5, wing 6·7, tail 2·82, tarsus 2·3 inch. Sexes alike. In winter the crown, sides of head, hind neck and upper parts are brownish ashy, unspotted; a white streak over, and the space round the eye white; wings and tail greyer than in the summer; under parts white, the sides of the neck streaked, and flanks marked with pale ashy or sooty grey; legs dull reddish orange.

Hab. Northern Europe, ranging into the Arctic Circle to about 69° N. lat.; Asia north to Kamchatka; during passage and in winter ranging to Southern Europe, Africa as far south as the Cape Colony, Japan, China, Corea, Mongolia, and India; only occurs in Great Britain on passage.

In its habits it somewhat resembles the Common Redshank, but is readily distinguishable by its larger size and by not having the short secondaries white. Nor does it frequent the sea coast so much, and breeds inland, usually in dry forest districts. It frequently wades in search of food, and can swim with ease. Its call-note is a clear, loud *tjuti.* As a rule it is shy and wary, but will approach quite close when its young are threatened. Its food consists of worms, insects, small crustaceans, &c. Its nest is a cup-shaped hollow in the ground, scantily lined, and the eggs, 4 in number, are deposited in May or early in June, and in ground-colour vary from dark stone-buff to pale greenish buff and bright beryl-green, and are marked with pale purplish shell-blotches and dark umber-brown surface spots and blotches, these latter being often collected at the larger end; in size they measure about 1·87 by 1·25.

1085. Greenshank.

TOTANUS GLOTTIS.

Totanus glottis (Linn.), Syst. Nat. i. p. 245 (1766) ; Naum. viii. p. 145, Taf. 201 ; Hewitson, ii. p. 336, pl. xci. ; Gould, B. of E. iv. pl. 312 ; David and Oust. Ois. Chine, p. 462 ; Seebohm, B. Jap. Emp. p. 321 ; Tacz. F. O. Sib. O. p. 860 ; Blanf. F. Brit. Ind. Birds, iv. p. 266 ; *T. nebularius*, Gunner. Leem. Lapp. Beschreib. p. 251 (1767) ; (Ridgway), p. 165 ; (Sharpe), Cat. B. Br. Mus. xxiv. p. 481 ; *Tot. canescens* (Gmel.), Syst. Nat. i. p. 668 (1788) ; Dresser, viii. p. 173, pl. 570 ; Saunders, p. 619 ; (Gould), B. of Gt. Brit. iv. pl. 53.

Chevalier gris, French ; *Andario, Picarot*, Span. ; *Pantana*, Ital. ; *Grünfüssiger-Wasserläufer*, German ; *Groenpootige Ruiter*, Dutch ; *Grönbenet-Klire*, Dan. ; *Glutsneppe*, Norweg. ; *Gluttsnäppa*, Swed. ; *Stuore-ćavću*, Lapp. ; *Valkea Vikla*, Finn. ; *Bolchoi-Ulit*, Russ. ; *Tantanna*, Hindu. ; *Awo-ashi-chidori*, Jap.

♂ *ad.* (Scotland). Head, neck, and upper parts generally ashy grey, broadly striped with black ; quills blackish, the first primary only with the shaft white ; lower back, rump, and upper tail-coverts white, the last irregularly barred with grey ; middle tail-feathers bluish grey, the rest white, more or less barred ; under parts white, the throat and breast, not the chin, distinctly spotted with black, flanks barred ; bill recurved ; blackish ; legs and feet green ; iris brown. Culmen 2·3, wing 7·7, tail 3·8, tarsus 2·3 inch. Sexes alike. In winter the upper parts are paler grey with narrower stripes, the dorsal feathers with white margins, the throat and breast less distinctly marked with blackish, and the legs paler, more yellowish green.

Hab. Europe, north almost to the North Cape, breeding in the northern portion of its range, and south to the Scottish Highlands ; migrating in autumn and winter to Southern Europe and Africa, as far south as the Cape Colony ; Asia north to Kamchatka, east to Japan ; on migration and in winter occurring in Manchuria, Corea, China, Burma, India, and Ceylon, south to Australia; of rare and accidental occurrence in Eastern America.

In habits it differs but little from the Redshank, but is more often seen by inland waters, and breeds often far inland, at some distance from water, and its cry is clearer and louder than that of the Redshank. Its nest is a mere depression in the ground, scantily lined with a few grass-bents, and the 4 eggs, which are usually deposited in May or June, are pale buffy white or stone-buff, with purplish brown shell-markings and bright dark brown surface blotches and spots, chiefly at the larger end, and measure about 1·91 by 1·33.

1086. Nordmann's Greenshank.

TOTANUS GUTTIFER.

Totanus guttifer, Nordm., in Erman's Reise, p. 17 (1835); (Sharpe), Cat. B. Br. Mus. xxiv. p. 479; (Tacz.), F. O. Sib. O. p. 858; Blanf. F. Brit. Ind. Birds, iv. p. 267; *T. haughtoni*, Armstrong, Str. Feath. 1876, p. 344; Harting, Ibis, 1883, p. 133, pl. iv.

♂ *ad.* (Amoor River). Very like *T. glottis* but smaller, has the middle tail-feathers white marbled with brownish grey, the rest white with a subterminal dusky line, the breast only sparsely spotted, and the lower back, rump, under wing-coverts, and axillaries pure white; basal half of bill horny yellow, the rest blackish; feet ochreous yellow; iris dark brown. Culmen 2·3, wing 6·6, tail 2·7, tarsus 1·65 inch.

Hab. Kamchatka, and Eastern Siberia, wintering in South China, Burma, and India.

Is as yet but little known, and nothing is on record respecting its nidification. Owing to its resemblance to *T. glottis* it may have been overlooked, but it can be distinguished from that species, as well by its smaller size as by the palmation of the toes, which is more as in *Terekia*.

1087. Marsh-Sandpiper.

TOTANUS STAGNATILIS.

Totanus stagnatilis, Bechst. Orn. Taschenb. ii. p. 292; Naum. viii. p. 171, Taf. 202; Gould, B. of E. iv. pl. 314; Dresser, viii. p. 151, pl. 566; David and Oust. p. 463; Seebohm, B. Jap. Emp. p. 322; Sharpe, Cat. B. Br. Mus. xxiv. p. 422; Tacz. F. O. Sib. O. p. 864; Blanf. F. Brit. Ind. Birds, v. p. 263.

Chevalier stagnatile, French; *Chorlito*, Span.; *Albastrello*, Ital.; *Teich-Wasserläufer*, German; *Prudovoi-Ulit*, Russ.; *Chota-gotra*, Hindu.

♂ *ad.* (Hungary). Upper parts greyish brown tinged with buff, mottled and streaked, except on the wing-coverts, with black; lower back, rump, and upper tail-coverts white, the last spotted and barred with black; middle tail-feathers greyish brown with darker bars, the rest chiefly white; quills brown, the secondaries externally margined with white; under parts white; the cheeks, ear-coverts, and upper breast minutely dark spotted; and the flanks irregularly barred; bill dark brown, but greenish at the base below; legs olivaceous; iris dark brown. Culmen 1·7, wing 5·3, tail 2·5, tarsus 2·0 inch. Sexes alike. In winter the upper parts are brownish grey, somewhat marked with white, the wing-coverts darker; under parts and axillaries pure white.

Hab. Central and Southern Europe, chiefly in the eastern portions; a rare straggler to the north central parts of Europe, but has occurred in Heligoland; Africa in winter, as far south as the Orange River; Asia, east to Japan, north to Dauria; in winter ranging to Manchuria, Burma, India, Ceylon, the Malay Archipelago, and Australia.

In general appearance and habits it is a miniature Greenshank. It frequents inland ponds, rivers, and marshes, and is as a rule not a shy bird, but sprightly and elegant in its movements. It usually breeds near, but occasionally at some distance from water, in grassy places, its nest resembling that of its congeners, and its eggs, 4 in number, are usually laid in June or July, and are ochreous buff, sometimes with a faint olivaceous tinge, with pale purplish brown shell-markings and rich dark brown surface spots and blotches, and measure about 1·49 by 1·11.

1088. YELLOWSHANK.

TOTANUS FLAVIPES.

Totanus flavipes (Gmel.), Syst. Nat. i. p. 659 (1788); Dresser, ix. p. 377, pl. 715; Sharpe, Cat. B. Br. Mus. xxiv. p. 431; Ridgway, p. 166; Saunders, p. 613; Lilford, v. p. 116, pl. 50; Poynting, p. 215, pl. 45.

♂ *ad.* (Wisconsin). Crown, nape, and hind-neck blackish brown, streaked with white; upper parts blackish brown, clearly marked and spotted with white and buffy grey; upper tail-coverts white, barred with blackish; quills blackish brown, the shaft of the first white, of the rest brown; middle tail-feathers dark ashy grey, the rest white, all barred with blackish; under parts white, the sides of head, neck, and breast streaked with blackish, those on the lower neck and breast broader; flanks barred with blackish; the axillaries with ashy brown; bill greenish black; legs yellow; iris dark brown. Culmen 1·6, wing 6·2, tail 2·6, tarsus 2·0 inch. Sexes alike. In winter the upper parts are darker and the markings reduced to a few whitish spots; upper tail-coverts, chin, and upper throat nearly white; flanks less marked with greyish brown.

Hab. North America, from the Hudson's Bay Territory, and Alaska, where it breeds, to Patagonia in winter; has occurred in South Greenland, and is a rare straggler to England, where two authentic examples have been obtained.

In habits it does not differ from its allies. It breeds in the high north of America, the nest being a mere depression in the ground scantily lined with grass-bents or dead leaves, or else quite unlined. The eggs, 4 in number, are usually deposited late in May or early in June, and vary a good deal, having the ground-colour from light drab to dark clay-ochre, the shell-markings pale purplish grey, and the surface spots and blotches black or blackish brown. In size they measure about 1·78 by 1·13.

1089. GREEN SANDPIPER.

TOTANUS OCHROPUS.

Totanus ochropus (Linn.), Syst. Nat. i. p. 250 (1766); Naum. viii. p. 59, Taf. 197; Gould, iv. pl. 315, fig. 1; id. B. of Gt. Brit. iv. pl. 56; Dresser, viii. p. 135, pl. 564; David and Oust. Ois. Chine, p. 465; Seebohm, B. Jap. Emp. p. 325; (Sharpe), Cat. B. Br. Mus. xxiv. p. 437; Tacz. F. O. Sib. O. p. 872; Blanf. F. Brit. Ind. Birds, iv. p. 262; Saunders, p. 609; Lilford, v. p. 105, pl. 46; Ridgway, p. 166; Poynting, p. 209, pl. 44.

Chevalier cul-blanc, French; *Lavandera grande, Cherlovita*, Span.; *Culbianco*, Ital.; *Punktirter-Wasserläufer*, German; *Witgatje*, Dutch; *Graabenet Klire*, Dan.; *Graabenet-Sneppe*, Norweg.; *Skogssnäppa*, Swed.; *Mustasiipi-vikla*, Finn.; *Tschernysch*, Russ.

♂ *ad.* (Spain). Crown, sides of head, and neck blackish brown, striped with white; upper parts blackish brown, tinged with metallic olivaceous and spotted with white; lower rump, upper tail-coverts, base of tail, and outermost tail-feathers white, rest of tail blackish brown, with three bars and the tips white; under parts white; the neck and flanks closely marked with blackish brown; axillaries brownish black with narrow white angular bars; bill blackish, tinged with grey at the base; legs lead-grey, washed with green on the joints; iris dark brown. Culmen 1·4, wing 5·4, tail 2·55, tarsus 1·33 inch. Sexes alike. In winter the upper parts are uniform greyish brown unspotted, and the crown and hind neck are ashy brown with a white streak above the eye.

Hab. Europe generally, north to the Arctic Circle but not in Lapland, breeding down to the north central portions, passing down to South Europe and Africa as far as the Cape Colony in winter; Asia, north to Kamchatka, east to Japan; south in winter to the Malay Archipelago; Corea; China; Burma, India, and Ceylon; of accidental occurrence in Nova Scotia.

Is generally to be found near inland ponds and streams, seldom on the coast, often at ponds in the woodlands. Its note is a clear loud *dlee-dlee-dlee*, uttered quickly, and its flight is swift and graceful. Like its allies it feeds on insects, larvæ, and worms. Its mode of breeding is absolutely peculiar, as it places its 4 eggs, in the latter half of May, in deserted nests of Thrushes, Blackbirds, Jays, and other birds, and even those of the Squirrel, almost always in the vicinity of a pond. The eggs vary in ground-colour from delicate greyish sea-green to greenish grey, and are marked with purplish grey shell blotches and dark brown surface spots, which are usually larger and more numerous at the larger end; in size they measure about 1·55 by 1·12.

1090. Solitary Sandpiper.

TOTANUS SOLITARIUS.

Totanus solitarius (Wilson), Amer. Orn. vii. p. 53, pl. 58, fig. 3 (1813); Dresser, ix. p. 373, pl. 714; (Sharpe), Cat. B. Br. Mus. xxiv. p. 444; Ridgway, p. 166; Saunders, p. 611; Lilford, v. p. 111, pl. 48; *Tot. chloropygius*, Vieill. Nouv. Dict. vi. p. 401 (1816).

♂ *ad.* (New Brunswick). Differs from *T. glareola* in having the rump and central tail-coverts and tail-feathers dark greenish brown, the rest of tail-feathers and lateral coverts white, barred with blackish; under wing-coverts and axillaries white, narrowly barred with greenish brown; bill dull greenish at base, otherwise blackish; legs dark greenish grey; iris brown. Culmen 1·35, wing 5·25, tail 2·3, tarsus 1·28 inch. Sexes alike. In winter the upper parts are greyer, the white spots less distinct, and the fore neck less distinctly streaked.

Hab. America, north to about 65° N. lat. in summer, and south to Argentina in winter; an accidental straggler to Britain, where three authenticated examples have been obtained.

In habits this bird resembles *T. glareola*, and in America frequents damp localities in the forest, and especially alder swamps. Its nest and eggs are as yet unknown.

1091. Wood-Sandpiper.

TOTANUS GLAREOLA.

Totanus glareola (Gmel.), Syst. Nat. i. p. 677 (1788); Naum. viii. p. 78, Taf. 198; Hewitson, ii. p. 330, pl. xc. fig. 1; Gould, B. of E. iv. pl. 315, fig. 2; id. B. of Gt. Brit. iv. pl. 57; Dresser, viii. p. 143, pl. 565; David and Oust. Ois. Chine, p. 464; Seebohm, B. Jap. Emp. p. 324; (Sharpe), Cat. B. Br. Mus. xxiv. p. 491; Tacz. F. O. Sib. O. p. 874; Blanf. F. Brit. Ind. Birds, iv. p. 261; Ridgway, p. 166; Saunders, p. 607; Lilford, v. p. 109, pl. 47; Poynting, p. 203, pl. 43.

Chevalier sylvain, French; *Carregadet*, Span.; *Piro-piro-boscareccio*, Ital.; *Bruch-Wasserläufer*, German; *Boschruiter*, Dutch; *Kjærsneppe*, Dan.; *Grönbenet-Sneppe*, Norweg.; *Grönbena*, Swed.; *Ucca-čavču*, Lapp.; *Lire*, *Suovikla*, Finn.; *Travnik*, *Bolotney-Kulik*, Russ.; *Chupka*, *Tútwari*, Hindu.

♂ *ad.* (Finland). Crown, nape, and hind neck blackish brown finely striped with white; a white streak over the eye- and ear-coverts, and a blackish brown one from the base of the bill to the eye; upper parts blackish brown with a greenish tinge, spotted with white and greyish buff; upper tail-coverts white; middle tail-feathers like the back, but barred with buffy grey and white, the rest white barred with blackish brown; shaft of first quill only white; chin white; sides of head, neck, and breast washed with buffy grey, and striped, the breast and flanks more boldly, with blackish brown angular bars; rest of under parts white, the axillaries marked with brown; bill black; the base of lower mandible olive-greenish; legs greenish ochreous; iris dark brown. Culmen 1·25, wing 4·9, tail 2·15, tarsus 1·45 inch. Sexes alike. In winter the pale margins are broader on the upper parts, which are paler than in summer, and the throat, neck, and flanks are less marked with brown, but the two former are more washed with buffy grey.

Hab. Europe generally, north far into Lapland; and in winter migrating down to South Africa; Asia, north to Kamchatka, east to Japan, south to Corea and China, passing down to Burma, India, Ceylon, the Malay Archipelago, and Australia in winter.

Is more particularly an inland marsh-frequenting species, and is also often seen in damp wooded localities. Its call-note is a very clear, loud whistle, and in the pairing season it utters a succession of notes, *leero, leero, leero, teeleedl, teeleedl, teeleedl*, uttered several times in succession. It breeds in open, marshy, grass-covered localities, the nest being a depression in an elevated patch scantily lined, and the 4 eggs, which are usually laid in May, or early in June, vary in ground-colour from stone-grey to stone-ochre, with purplish grey shell-markings, and reddish brown or dark brown surface spots and blotches, and in size measure about 1·41 by 1·06.

1092. SUMMER-SNIPE.

TOTANUS HYPOLEUCUS.

Totanus hypoleucus (Linn.), Syst. Nat. i. p. 250 (1766); Naum. viii. p. 7, Taf. 194; Hewitson, ii. p. 333, pl. xc. fig. 2; Gould, B. of E. iv. pl. 316; id. B. of Gt. Brit. iv. pl. 58; Dresser, viii. p. 127, pl. 563; (David and Oust.) Ois. Chine, p. 467; Seebohm, B. Jap. Emp. p. 326; (Sharpe), Cat. B. Br. Mus. xxiv. p. 456; (Tacz.), F. O. Sib. O. p. 882; Blanf. F. Brit. Ind. Birds, iv. p. 260; (Ridgway), p. 170; Saunders, p. 605; Lilford, v. p. 103, pl. 45, Poynting, p. 193, pl. 41.

Chevalier guignette, French; *Maçarico das rochas,* Portug.; *Lavandera chica, Siseta,* Span.; *Piro-piro-piccolo,* Ital.; *Fluss Uferläufer,* German; *Oeverlooper, Steenvink,* Dutch; *Muddersneppe,* Dan.; *Strandsnipe,* Norweg.; *Drillsnäppa,* Swed.; *Libik,* Lapp.; *Ranta-siippi, Koska-siippi,* Finn.; *Beregovnik,* Russ.

♂ *ad.* (N. Russia). Upper parts bronzy olivaceous brown, the crown, hind neck, and back, wing-coverts, scapulars, and upper tail-coverts barred and narrowly striped with blackish; primaries blackish, the secondaries with a broad basal band and tips white; middle tail-feathers like the back, the rest white, barred with blackish; chin and a streak over the eye white; sides of neck and breast pale ashy grey, striped with blackish; rest of under parts white; base of bill dull fleshy, the rest dark brown; legs grey, tinged with green; iris dark brown. Culmen 1·1, wing 4·5, tail 2·55, tarsus 1·0 inch. Sexes alike. In winter the upper parts are more uniform and less marked with black; the throat and breast greyer, and striped less distinctly. The young have the feathers on the upper parts tipped with brownish ochreous and narrowly barred with black.

Hab. The whole of Europe from the Arctic Ocean to the Mediterranean, breeding almost everywhere; Africa, in winter south to the Cape Colony; Asia generally, north to Kamchatka; Japan, Corea, Mongolia, Manchuria, China, Burma, India; in winter migrating south to Australia.

Frequents inland streams, ponds, and lakes, and is not often seen on the sea coast, nor does it collect in flocks, but is seen singly or in pairs, and affects places where the shores of the lakes or banks are wooded or covered more or less with bushes, and is as a rule shy and wary. Its note is a shrill *di, di, di,* its flight is rapid but wavering, and it frequently nods its head, and jerks its tail when tripping along. It breeds in unfrequented places near water, often on a river bank or sometimes in willow thickets, its nest being a mere depression scantily lined with a few grass blades, and its 4 eggs, which are usually deposited in May, vary from creamy white to warm stone-buff in ground-colour, the surface markings from dull red to brownish red, and the shell spots are purplish grey. In size they measure about 1·42 by 1·04.

1093. Spotted Sandpiper.

TOTANUS MACULARIUS.

Totanus macularius (Linn.), Syst. Nat. i. p. 249 (1766); Wilson, Am. Orn. vii. p. 60, pl. 59, fig. 1; Hewitson, ii. p. 335, pl. xc. fig. 3; Gould, B. of E. iv. pl. 317; id. B. of Gt. Brit. iv. pl. 59; (Naum.), viii. p. 34, Taf. 195; Dresser, ix. p. 367, pl. 713; (Sharpe), Cat. B. Br. Mus. xxiv. p. 468; Saunders, p. 605*; Ridgway, p. 170; Poynting, p. 199, pl. 42.

♂ *ad.* (Washington). Differs from *T. hypoleucus* in having the upper parts more boldly marked with blackish brown, the breast thickly, and the rest of the under parts more sparsely spotted with brownish black; base of bill fleshy pink, the rest dusky brown; legs pale pink; iris brown. Culmen 1·10, wing 4·4, tail 2·1, tarsus 1·05 inch. Sexes alike. In winter the upper parts are olivaceous brown, without the bold dark markings; wing-coverts barred with blackish; under parts white; the sides of lower neck washed with pale ashy brown. The young bird has all the secondaries barred with ashy brown, whereas in that of *T. hypoleucus* the 8th and 9th are nearly white.

Hab. North America generally, migrating in winter south to Brazil; of rare and doubtful occurrence in Britain, but of still more doubtful occurrence elsewhere in Europe.

In habits and nidification it closely resembles *T. hypoleucus*, but its eggs are different, being creamy drab or creamy ochreous in ground-colour, the underlying shell-markings of an indistinct neutral tint, and the surface spots and blotches rich dark brown. In size they measure about 1·22 by 0·93.

1094. GREY-RUMPED SANDPIPER.

TOTANUS BREVIPES.

Totanus brevipes, Vieill. Nouv. Dict. vi. p. 410 (1816); (Sharpe), Cat. B. Br. Mus. xxiv. p. 449; (Tacz.), F. O. Sib. O. p. 877; Ridgway, p. 168; *T. pulverulentus*, Müll. Naturk. Verh. Land en Volkenk. p. 152 (1829–44); Temm. and Schlegel, Faun. Jap. Aves, p. 109, pl. 65; *T. griseopygius*, Gould, P.Z.S. 1848, p. 39; id. B. of Austral. vi. pl. 38; *T. incanus* (nec. Gmel.), David and Oust. Ois. Chine, p. 466; Seebohm, B. Jap. Emp. p. 323.

♂ *ad.* (Japan). Upper parts almost uniform ashy grey, the rump, upper tail-coverts, and middle tail-feathers bluer, the remaining tail-feathers pale ashy grey; a narrow line over the forehead to behind the eye white, slightly marked with slaty black; chin white; neck striped; the breast and upper flanks narrowly barred with slaty blackish; rest of under parts white; bill brown; legs ochreous yellow; iris dark brown. Culmen 1·6, wing 6·55, tail 3·0, tarsus 1·4 inch. Sexes alike. In winter many of the feathers on the upper parts are narrowly margined with dull white; the sides of the head, neck, face, breast, and upper flanks ashy grey unbarred.

Hab. Kamchatka, Eastern Siberia, and Japan, migrating south for the winter to China, the Malay Archipelago, the Papuan Islands, and Australia.

Nothing appears to be on record respecting the habits or nidification of this species.

1095. WANDERING SANDPIPER.

TOTANUS INCANUS.

Totanus incanus, Gmel. Syst. Nat. i. 658 (1788); Sharpe, Cat. B. Br. Mus. xxiv. p. 453; (Tacz.), F. O. Sib. O. p. 880; (Ridgway), p. 168.

♂ *ad.* (Bering Is.). Differs from *T. brevipes* in having the neck darker and more boldly striped, and the under parts generally, including the under tail-coverts, but not the middle of the abdomen, boldly and broadly barred with blackish slate; bill and feet dull greenish; iris brown. Culmen 1·7, wing 6·7, tail 3·0, tarsus 1·3 inch. In winter the sides of the neck and of the breast and flanks are dull slate grey, the middle of the breast, sides of abdomen, and under tail-coverts narrowly barred with slaty blackish; middle of abdomen white.

Hab. The Pacific coasts of North America from the Galàpagos and Lower California to the Aleutian Islands, Norton Sound and Alaska; the Commander Islands, Kamchatka, the Chukchi Peninsula; in winter migrating to the Sandwich Islands and throughout Oceania to the New Hebrides.

Is said to be numerous on the rocky shores of all the islands of Bering Sea, and when disturbed on their feeding-grounds show but little alarm. Their note is a loud ringing whistle, which they utter when they take flight. This species may be distinguished from *T. brevipes* in all plumages by having the nasal groove extending to within the terminal third of the upper mandible, whereas in *T. brevipes* it scarcely extends beyond the half, and the tarsus is usually reticulated behind and not plated. Nothing appears to be known respecting the nidification of this species.

TEREKIA, Bonap., 1838.

1096. TEREK SANDPIPER.

TEREKIA CINEREA.

Terekia cinerea (Güld.), Nov. Comm. Petrop. xix. p. 473, tab. 19 (1774), (Naum.), xiii. p. 248, Taf. 386, fig. 3; Gould, B. of Austral. vi. pl. 34; Dresser, viii. p. 195, pl. 572; David and Oust. Ois. Chine, p. 460; Sharpe, Cat. B. Br. Mus. xxiv. p. 474; Tacz. F. O. Sib. O. p. 856; Blanf. F. Brit. Ind. Birds, iv. p. 258; *Scolopax terek*, Lath. Ind. Orn. ii. p. 724 (1790); (Gould), B. of E. iv. pl. 307; (Seebohm), B. Jap. Emp. p. 326.

Morodunka, Russ.

♂ *ad.* (Archangel). Upper parts grey lined with blackish, and a distinct black line along each side of the middle of the back; least wing-coverts and quills black, the latter washed with grey, the secondaries and inner primaries tipped with white; tail grey with a faint coppery gloss; under parts white; the sides of the head, neck, and breast striped with greyish brown, the last tinged with grey; bill curved upwards, blackish, with the base of lower mandible greenish yellow; legs pale yellowish green; iris blackish grey. Culmen 1·8, wing 5·3, tail 2·4, tarsus 1·05 inch. Sexes alike. In winter the upper parts lack the black, it being only faintly indicated, and the under parts are white, the sides of neck and breast washed with grey, and the sides of the head streaked with grey.

Hab. Northern Russia, having only once been recorded from so far west as Finland; of rare occurrence in Germany and Italy; migrating south through Eastern Europe to South Africa; Northern Siberia, migrating south through Japan, China, and India to Australia in winter.

By many authors the present species has been united to the Godwits, but it is essentially a Sandpiper, in habits most nearly resembling *T. hypoleucus*, and its call-note is a clear, loud, musical whistle. It frequents river banks and the shores of small lakes and ponds, and feeds on worms, insects, &c., like the Sandpipers. Its nest, which is a mere depression in the ground, is usually situated in open places near bushes, and its 4 eggs, which are usually deposited in June, are dull buff with purplish grey shell-, and purplish brown surface-spots and blotches, and measure about 1·53 by 1·7.

MACRORHAMPHUS, Leach, 1816.

1097. Red-breasted Snipe.

MACRORHAMPHUS GRISEUS.

Macrorhamphus griseus (Gmel.), Syst. Nat. i. p. 658 (1788); Gould, B. of E. iv. p. 323; id. B. of Gt. Brit. iv. pl. 76; Dresser, viii. p. 187, pl. 571; Sharpe, Cat. B. Br. Mus. xxiv. p. 394; Tacz. F. O. Sib. O. p. 951; Ridgway, p. 151; Seebohm, B. Jap. Emp. p. 330; Saunders, p. 621; Lilford, v. p. 71, pl. 29; Poynting, p. 123, pl. 27; *M. noveboracensis* (Gmel.), ut supra; Wilson, Am. Orn. vii. p. 45, pl. 58, fig. 1; *M. scolopaceus*, Lawr. Ann. Lyc. New York, v. p. 4, pl. 1 (1852); Ridgway, p. 151.

♂ *ad.* (N. America). Crown, nape, and upper parts varied black and rusty rufous; rump and upper tail-coverts white, tinged with rufous and barred with black; quills blackish, the short secondaries and larger wing-coverts dark grey, margined and tipped with white; tail broadly barred with black, the middle feathers rusty ochreous, the rest white; sides of head, throat, and under parts rusty red, paler on the lower abdomen; sides of neck and upper flanks spotted, lower flanks and under tail-coverts barred with black; under wing-coverts and axillaries white, barred with blackish grey; bill blackish brown; legs pale olivaceous; iris brown. Culmen 2·35, wing 5·7, tail 2·45, tarsus 1·4 inch. Sexes alike. In winter the crown, nape, and upper parts are dull ashy grey, the back slightly marked with blackish; lower back nearly white; no trace of rufous in the plumage; under parts white, the neck and breast clouded, and the flanks and under tail-coverts barred with ashy grey.

Hab. North America, breeding in the high north, wintering in Central and South America; of rare occurrence in S. Greenland; Britain, frequently in France, and twice in Denmark; the Chukchi Peninsula in N.E. Siberia, and has been twice obtained in Japan.

In habits it resembles the Sandpipers and Godwits, and has nothing in common with the Snipes except its bill. In winter and on passage it collects in flocks, and frequents marshy localities and mud-flats, feeding on worms and insects of various kinds. It breeds in Arctic America in June, the nest being a depression in the ground, usually in a grassy hummock in marshy places, the lining being merely a few dry leaves. The 4 eggs vary in ground-colour from clay-olive to greyish ochreous, and the markings, which are collected chiefly at the larger end, are dark umber-brown. In size they measure about 1·75 by 1·22.

1098. SEMIPALMATED SNIPE.

MACRORHAMPHUS SEMIPALMATUS.

Macrorhamphus semipalmatus, Jerdon: Blyth, J. A. Soc. Beng. xvii. p. 252 (1848); (David and Oust.), Ois. Chine, p. 474, pl. 121; (Tacz.), F. O. Sib. O. p. 936; Blanf. F. Brit. Ind. Birds, iv. p. 257; Ridgway, p. 151; *M. taczanowskii* (Verreaux), Rev. and Mag. 1860, p. 206, pl. 14; Sharpe, Cat. B. Br. Mus. xxiv. p. 400.

♂ *ad.* (Dauria). Differs from *M. griseus* in being larger, in having the lower back, rump, and upper tail-coverts closely marked and barred with blackish brown; the under parts more uniform rufous, unspotted on the throat and breast, and the under wing-coverts white, unbarred; beak and legs black; iris dark brown. Culmen 3·03, wing 6·68, tail 3·0, tarsus 1·97 inch. In winter dress it may be distinguished by the barred rump, &c., the unbarred axillaries and under wing-coverts, and the flanks and under tail-coverts less barred. In general appearance and size it resembles *L. lapponica*, being very Godwit-like, but is readily distinguishable by its barred rump and snipe-like bill.

Hab. Eastern Siberia (Irkutsk and Dauria); Mongolia and China in winter; has also been obtained in Burma and near Calcutta in winter.

Is said to frequent the marshy shores of large rivers in Dauria, but I find nothing on record respecting its habits, which are probably similar to those of *M. griseus.* Its nest and eggs are unknown.

LIMOSA, Briss., 1760.

1099. BAR-TAILED GODWIT.

LIMOSA LAPPONICA.

Limosa lapponica (Linn.), Syst. Nat. i. p. 246 (1766); Dresser, viii. p. 203, pls. 573 figs. 1, 2, 574 fig. 2; Sharpe, Cat. B. Br. Mus. xxiv. p. 373; Tacz. F. O. Sib. O. p. 932; Blanf. F. Brit. Ind. Birds, iv. p. 256; Ridgway, p. 163; Saunders, p. 623; Lilford, v. p. 129, pl. 56; Poynting, p. 231, pl. 49; *L. ægocephala*, Linn. Syst. Nat. i. p. 246 (1766); *L. meyeri*, Leisl. Nachtrag. Bechst. Naturg. ii. p. 172 (1811–15); Naum. viii. p. 428, Taf. 214; *L. rufa*, Temm. Man. d'Orn. ii. p. 668 (1820); Gould, B. of E. iv. pl. 306; id. B. of Gt. Brit. iv. pl. 51; Hewitson, ii. p. 343, pl. xciv.

Barge rousse, French; *Parda*, Portug.; *Tetol*, Span.; *Pittima minore*, Ital.; *Rostrothe-Uferschnepfe*, German; *Rosse-Grutto*, Dutch; *Rödbrun-Kobbersneppe*, Dan.; *Rödspove*, Norweg.; *Myrspofv*, *Roströd-Långnäbba*, Swed.; *Kydi*, Lapp.; *Puna-Kuovi*, Finn.; *Krasnöi-sookalen*, Russ.; *Kojaku-chidori*, Jap.

♂ *ad.* (Pagham). Crown, nape, and upper parts blackish brown, margined with rust-red; rump white with narrow brown lines; upper tail-coverts white, washed with rufous and marked with dark brown; tail similar but broadly barred with dark brown and tipped with white; primary quills blackish brown; secondaries dark grey margined with white, the inner ones darker and marked with rufous; sides of head, neck, and under parts rich ferruginous; the lores, auriculum, and sides of neck lined with black; lower abdomen washed, and under tail-coverts marked with white, the latter spotted with brown; under wing-coverts white with dark central lines and submargins; axillaries white banded with blackish; bill reddish yellow at base, otherwise blackish; legs black, iris brown. Culmen 3·5, wing 8·4, tail 2·7, tarsus 2·2 inch. Female larger and less rufous. In winter the upper parts are ashy brown with dark shafts and paler margins to the feathers; lower back and rump white with a few dark markings; lower parts white marked with brown on the fore neck and upper breast.

Hab. Northern Europe into Lapland, and Asia, east to the Yenesei valley; in autumn migrating south to South Europe, and Africa south to Senegambia; Canaries; Asia, south to Sind in winter; Great Britain in spring, autumn, and winter.

Frequents estuaries, mud-flats, and the sea shore, and is usually seen in company with other waders. Its flight is light and buoyant, and its note a loud shrill whistle. Its food consists of worms, aquatic insects, and crustaceans, in search of which it may be seen probing the mud and sands. It breeds in the interior of Lapland, not further west than the Torneå valley, and as far east as the Yenesei, its nest being a mere depression in the ground, or on a tussock, and the eggs, 4 in number, are usually deposited in May, and are light olive-green, marked, chiefly at the larger end, with dark brown, and measure about 2·0 by 1·49.

1100. SUBSP. LIMOSA BAUERI.

Limosa baueri, Naum. Vög. Deutschl. viii. p. 429 (1836); David and Oust. Ois. Chine, p. 459; Tacz. F. O. Sib. O. p. 933; Ridgway, p. 163; *L. novæ-zealandiæ*, Gray, Gen. of B. iii. p. 570 (1847); Sharpe, Cat. B. Br. Mus. xxiv. p. 377; *L. uropygialis*, Gould, P.Z.S. 1848, p. 38; id. B. of Austr. vi. pl. 29; Seebohm, B. Jap. Emp. p. 329.

Veretennic, Russ.

♂ *ad.* (Japan). Differs from *L. lapponica* in summer in having the red portion of the plumage paler, the lower back and rump blackish with white margins, and the axillaries distinctly barred with brown. Culmen 3·15, wing 8·74, tail 2·95, tarsus, 2·16 inch. In winter it can always be recognised by the dark rump and barred axillaries.

Hab. Alaska; Eastern Siberia; the Commander Islands; Mongolia; Japan; Corea; migrating to S. China, the Malay Archipelago, Oceania, Australia, and New Zealand in winter.

In general habits it does not differ from *L. lapponica.* It breeds in the Lake Hanka district in Mongolia, and in Alaska, its nest being a rounded depression in a tussock, lined with dry grass, and its 2 eggs, which are described as being light olivaceous, spotted with dark brown, but sometimes nearly uniform, in size measure about 2·20 by 1·42.

1101. BLACK-TAILED GODWIT.

LIMOSA BELGICA.

Limosa belgica (Gmel.), Syst. Nat. i. p. 663 (1788); Blanf. F. Brit. Ind. Birds, iv. p. 254; Saunders, p. 625; Poynting, p. 235, pl. 50; *L. limosa* (Linn.), Syst. Nat. i. p. 245 (1766); Sharpe, Cat. B. Br.

Mus. xxiv. p. 381; Ridgway, p. 164; *L. melanura*, Leisl. Nachtr. Bechst. Naturg. ii. p. 153 (1813); Naum. viii. p. 406, Taf. 212, 213; Gould, B. of E. iv. pl. 305; id. B. of Gt. Brit. iv. pl. 50; Hewitson, ii. p. 342, pl. xciii.; Seebohm, B. Jap. Emp. p. 329; *L. melanuroides*, Gould, P.Z.S. 1846, p. 84; id. B. of Austral. vi. pl. 28; *L. brevipes* (nec. Gray), Schlegel, Mus. Pays-Bas, *Scolopaces*, p. 21 (1864); David and Oust. Ois. Chine, p. 460; Tacz. F. O. Sib. O. p. 929; *L. ægocephala* (nec. Linn.), Dresser, viii. p. 211, pl. 574; Lilford, v. p. 125, pl. 55.

Barge à queue noire, French; *Abujeta, Sarseruelo*, Span.; *Maçarico gallego, Parda*, Portug.; *Pittima*, Ital.; *Schwarzschwänziger-Uferschnepfe*, German; *Grütto, Schries*, Dutch; *Jardreka*, Icel.; *Sorthalet-Rödspove*, Norweg.; *Sorthalet-Kobbersneppe*, Dan.; *Rödspof*, Swed.; *Evdoshka, Veretennik*, Russ.; *Gudera*, Hindu.; *Sorihashi-chidori*, Jap.

♂ *ad.* (England). Head, neck, and breast rusty red, the crown and nape striped with black; upper parts barred black and rusty red; lower back and rump blackish; upper tail-coverts white; tail black, the middle feathers tipped with grey, the outermost white on the basal half; quills blackish, the inner primaries and secondaries white at base; wing-coverts earthy grey, the larger with broad white tips; breast indistinctly barred with black; under parts white, irregularly barred with black and rufous, the flanks washed with rufous; axillaries and under wing-coverts white; beak blackish brown, orange at the base; legs blackish; iris brown. Culmen 3·9, wing 8·0, tail 3·6, tarsus 2·8 inch. Female larger and duller coloured. In winter the plumage lacks all red, the upper parts are earthy grey, the throat, neck, and upper breast pale earthy grey, the rest of the under parts white.

Hab. Europe generally, a regular visitor to Iceland, where it breeds; accidental in Greenland; wintering in South Europe and Africa, south to Abyssinia; Asia, east to Japan, north to Kamchatka; Mongolia, Corea, Manchuria; China, Burma, India, the Malay Archipelago, and Australia in winter; formerly breeding in England and abundantly in the Netherlands.

Frequents marshy and damp localities, and in winter the sea coasts, and feeds on worms, insects, snails, larvæ, &c. Its note is a clear *tu-ee-tooo*, oft repeated, and when alarmed it utters a clamorous wail, *grutto, grutto*. The nest is a mere depression in the moss, and the 4 eggs, which are usually deposited in May, are dull greenish indistinctly marked with dark brownish olive, and in size measure about 2·13 by 1·46.

Birds from East Asia are as a rule rather smaller than European ones.

NUMENIUS, Briss., 1760.

1102. Eskimo Curlew.

NUMENIUS BOREALIS.

Numenius borealis (Forster), Phil. Trans. lxii. p. 411 (1772); Audub. B. Am. pl. 208; Newton, P.Z.S. 1871, pl. iv. fig. 1 (egg); Dresser, viii. p. 221, pl. 575; Sharpe, Cat. B. Br. Mus. xxiv. p. 368; Ridgway, p. 171; Saunders, p. 631; Lilford, v. p. 137, pl. 59; Poynting, p. 253, pl. 54.

♂ *ad.* (N. America). Crown, nape, and upper parts umber-brown, marked with dull isabelline, and in parts washed with pale rufous; quills dark earth-brown, the shafts white; upper wing-coverts margined with greyish brown; tail dull rufous brown, barred with umber-brown; sides of face white striped with brown; a dark line through and behind the eye; throat white; rest of under parts pale rufous buff, the middle of the abdomen nearly white; breast with V-shaped brown markings; flanks rufous, similarly marked; under wing-coverts and axillaries rich rufous barred with blackish brown; under tail coverts rufous buff, similarly barred; beak brownish black; base of lower mandible yellowish flesh; legs greenish brown; iris blackish brown. Culmen 2·4, wing 8·0, tail 3·4, tarsus 1·8 inch. Female similar.

Hab. North America, north to within the Arctic Circle, migrating south in the winter through Central America to the southern parts of South America; of rare and accidental occurrence in Greenland and Britain.

Frequents not only the sea coasts but is frequently to be met with inland, and on migration and in winter is found in large flocks. It feeds on insects and molluscs, and is also said to be partial to crowberries. It breeds in the barren grounds in Arctic North America, the nest being a mere hollow in the ground lined with a few decayed leaves, and the eggs, which are laid late in June or early in July, vary in ground-colour from pale ashy green to ochreous drab, and deep olivaceous drab, and the markings and blotches are of various shades of sepia, usually more numerous at the larger end. In size they measure about 2·0 by 1·45.

1103. Little Whimbrel.

NUMENIUS MINUTUS.

Numenius minutus, Gould, P.Z.S. 1840, p. 176; id. B. of Austral. vi. pl. 44; David and Oust. Ois. Chine, p. 458; Seebohm, B. Jap. Emp. p. 317; (Sharpe), Cat. B. Br. Mus. xxiv. p. 371; Tacz. F. O. Sib. O. p. 947; *N. minor* (nec. Leach), Dresser, viii. p. 245.

♂ *ad.* (China). Differs from *N. borealis* in having the upper parts conspicuously mottled with warm sandy buff; the sides of the head, mesial line, and under parts rufous isabelline or sandy buff; lower throat and neck streaked, and flanks barred with dusky brownish; under wing-coverts and axillaries rufous isabelline, barred with dusky brown; bill blackish brown, the base of lower mandible flesh-coloured; legs grey; iris dark brown. Culmen 2·0, wing 7·3, tail 3·0, tarsus 1·8 inch.

Hab. Eastern Siberia and Mongolia; Japan and China; the Moluccas and Australia on passage and in winter.

Nothing seems to be on record respecting the habits of this bird, which evidently breeds in Eastern Siberia, not far north of Dauria, but its nest and eggs are as yet unknown.

1104. WHIMBREL.

NUMENIUS PHÆOPUS.

Numenius phæopus (Linn.), Syst. Nat. i. p. 243 (1766); Naum. viii. p. 506, Taf. 217; Hewitson, ii. p. 324, pl. lxxxvii. fig. 1; Gould, B. of E. iv. pl. 303; id. B. of Gt. Brit. iv. pl. 49; Dresser, viii. p. 227, pl. 576; Sharpe, Cat. B. Br. Mus. xxiv. p. 356; Blanf. F. Brit. Ind. Birds, iv. p. 253; Ridgway, p. 171; Saunders, p. 629; Lilford, v. p. 135, pl. 58; Poynting, p. 249, pl. 53.

Courlis, French; *Maçarico gallego,* Portug.; *Zarapito, Serranct,* Span.; *Chiurletto,* Ital.; *Regen-brachvogel,* German; *Regenwulf,* Dutch; *Spói,* Icel.; *Lille-Regnspove,* Dan.; *Smaaspov,* Norweg.; *Småspofv,* Swed.; *Kúskastak,* Lapp.; *Pieni-Kuovi,* Finn.; *Malyi-Kronschnep, Kulik,* Russ.; *Chota-Goungh,* Hindu.

♂ *ad.* (Sussex). Crown and nape dark brown with a mesial and two superciliary lines to the nape dull white; upper parts dark brown with indistinct greyish brown margins; hind neck dull white streaked with brown; rump and upper tail-coverts white, the latter spotted and barred with dusky; tail brownish grey, barred with dark brown and tipped with white; quills blackish brown, the shafts white; wing-coverts dusky brown spotted with dull white; under parts white; the sides of head, neck, breast, and flanks streaked with brown; under wing-coverts and axillaries white, barred with brown; bill black, the base of lower mandible pale brown; legs light greyish blue; iris brown. Culmen 3·0, wing 9·3, tail 4·0, tarsus 2·3 inch. Female similar but larger.

Hab. Europe generally, north to Iceland, Greenland, and Lapland, migrating through Southern Europe to South Africa and Madagascar, Azores, Canaries, and Madeira for the winter; Asia, east to India and Burma, south to the Malay Archipelago.

In habits it resembles the Curlew. In the autumn and spring it is usually seen on our coasts or on pasture lands near the sea in small bands or flocks, and feeds on small shell-fish, insects, and crustaceans. Its note is a trilling *tetty, tetty, tetty, tet* quickly repeated. It breeds in the Færoes, Northern Scandinavia, and Iceland, its nest being a depression on some slightly elevated and dry spot in the marshes, scantily lined with a few dead leaves or grass-bents, and its 4 eggs, which are usually deposited late in May or early in June, vary in colour from olive-brown to dark greenish brown, and are clouded and blotched, chiefly at the larger end, with dark umber-brown, but occasionally they are unmarked. In size they average 2·29 by 1·60.

1105. SUBSP. NUMENIUS VARIEGATUS.

Numenius variegatus (Scopoli), Del. Flor. et Faun. Insubr. ii. p. 92 (1786); Seebohm, B. Jap. Emp. p. 317; Sharpe, Cat. B. Br. Mus. xxiv. p. 361; Tacz. F. O. Sib. O. p. 943; *N. uropygialis*, Gould, P.Z.S. 1840, p. 175; id. B. of Austral. vi. pl. 43.

Ko-shaku-shigi, Jap.

♂ *ad.* (Japan). Differs from *N. phæopus* in having the lower back and rump boldly marked with brown, and the axillaries more broadly and closely barred. Culmen 3·2, wing 8·9, tail 3·78, tarsus 2·2 inch.

Hab. Eastern Siberia, north to Kamchatka; Japan, Corea, and China; migrating south through the Malay Archipelago to Australia for the winter.

In habits it does not appear to differ from *N. phæopus*, but its nest and eggs seem to be unknown.

1106. SLENDER-BILLED CURLEW.

NUMENIUS TENUIROSTRIS.

Numenius tenuirostris, Vieill. Nouv. Dict. viii. p. 302 (1817); Naum. viii. p. 527, Taf. 218; Dresser, viii. p. 237, pl. 577; Sharpe, Cat. B. Br. Mus. xxiv. p. 348.

Courlis à bec grêle, French; *Zarapito*, Span.; *Chiurlotello* Ital.; *Dünnschnabliger Brachvogel*, German.

♂ *ad.* (Malta). Differs from *N. arquatus* in being much smaller, the hind neck greyish white streaked with rufous brown; lower back, rump, and upper tail-coverts pure white, the latter marked with fine brown lines;

lores, eye-streak, cheeks, and ear-coverts white marked with fine lines and specks of black; throat pure white; under parts white, the lower throat and breast with central brown streaks, the sides of the breast with large pear-shaped spots; under wing-coverts and axillaries pure white; bill brown, the base of lower mandible flesh-coloured; legs plumbeous grey; iris brown. Culmen 2·75, wing 9·3, tail 3·8, tarsus 2·1 inch. Sexes alike.

Hab. Southern Europe, of rare occurrence in Central Europe but has been obtained in Holland, Belgium, and France; North Africa, ranging south to Khartoum; to the east it is found in Transcaspia, where it probably breeds.

In habits this Curlew is said to differ from *N. arquatus* in frequenting marshy localities and often wading up to the belly in water. Respecting its nidification nothing definite appears to be known.

1107. COMMON CURLEW.

NUMENIUS ARQUATUS.

Numenius arquatus (Linn.), Syst. Nat. i. p. 242 (1766); Naum. viii. p. 478, Taf. 216; Hewitson, ii. p. 322, pl. lxxxvii. fig. 2; Gould, B. of E. iv. pl. 302; id. B. of Gt. Brit. iv. pl. 48; Dresser, viii. p. 243, pl. 578; Seebohm, B. Jap. Emp. p. 314; Sharpe, Cat. B. Br. Mus. xxiv. p. 341; Tacz. F. O. Sib. O. p. 938; Blanf. F. Brit. Ind. Birds, iv. p. 252; Saunders, p. 629; Lilford, v. p. 131, pl. 57; Poynting, p. 243, pls. 51, 52; *N. lineatus*, Cuv. Règne Anim. i. p. 521 (1829); David and Oust. Ois. Chine, p. 457.

Courlis, French; *Maçarico real*, Portug.; *Zarapito reál*, Span.; *Chiurlo*, Ital.; *Grosser Brachvogel*, German; *Wulp*, Dutch; *Stor-Regnspove*, Dan.; *Stor-Spove*, Norweg.; *Storspof*, Swed.; *Iso-kuovi*, Finn.; *Kulik-kotrous*, *Bolschoi-Kronschnep*, Russ.; *Goar-Goungh*, Hindu.

♂ *ad.* (Sweden). Upper parts, head, and neck blackish brown with dirty white and pale fulvous margins to the feathers, some tinged with rufous; lower back and rump white with a few scattered drop-shaped spots; upper tail-coverts white slightly barred with brown and marked with rufous; tail white barred with blackish brown, the middle feathers tinged with ashy grey; quills blackish brown; shafts of outer ones white; chin, upper throat, and region round the eye white; rest of under parts white, the neck, breast, abdomen, and under tail-coverts narrowly, the flanks boldly striped with blackish brown; under wing-coverts and axillaries mottled or more or less barred with brown; bill dull fleshy at base, otherwise dark brown; legs plumbeous grey; iris brown. Culmen 5·0, wing 11·6, tail 4·9, tarsus 3·0 inch. Female similar.

Hab. Europe generally, north nearly to the Arctic Circle in summer; on migration and in winter south to the Cape Colony in South Africa; Madagascar; Asia, east to Dauria, and has occurred in Japan; Mongolia; China; Burma, India, Ceylon, the Andamans, Nicobars, and Laccadives in winter.

Frequents moors and open plains during the summer and open flats on the coasts in winter, and is one of the most cautious and wary birds. It feeds on worms, snails, insects of various kinds, and berries, and in winter on marine animals and crustaceans. Its note is a loud, weird, uncanny cry, which it utters directly it takes flight on the approach of an intruder. It breeds on the moors or in marshy places, the nest being a mere depression on a tussock, scantily lined, and the eggs, 4 in number, are usually deposited from early in April to late in May, and vary from light greenish to dark olivaceous in ground-colour, and are marked with purplish brown shell-markings and dark umber-brown surface spots and blotches; in size they measure about 2·72 by 1·84.

1108. AUSTRALIAN CURLEW.

NUMENIUS CYANOPUS.

Numenius cyanopus, Vieill. Nouv. Dict. viii. p. 306 (1817); Seebohm, B. Jap. Emp. p. 315; Sharpe, Cat. B. Br. Mus. xxiv. p. 350; Tacz. F. O. Sib. O. p. 940; *N. australis*, Gould, P.Z.S. 1837, p. 155; id. B. of Austr. vi. pl. 42; *N. major* (nec. Steph.), Temm. and Schlegel, Faun. Jap. Aves, pl. 66; *N. tahitiensis* (nec. Gmel.), Swinhoe, P.Z.S. 1871, p. 410; Ridgway, p. 171; David and Oust. Ois. Chine, p. 458.

♂ *ad.* (China). Differs from *N. arquatus* in having the rump and upper tail-coverts conspicuously marked with brown, and the upper and under parts washed with warm vinous buff or rufous buff; under wing-coverts and axillaries broadly barred with blackish brown. Culmen 7·8, wing 13·0, tail 5·4, tarsus 3·3 inch.

Hab. Eastern Siberia, north to Kamchatka; Japan, Corea, and China; passing the winter as far south as Australia; of rare occurrence in Alaska.

It is said not to differ from our European Curlew in its general habits. Nothing, however, appears to be known respecting its nidification.

IBIDORHYNCHUS, Vigors, 1831.

1109. IBIS-BILL.

IBIDORHYNCHUS STRUTHERSI.

Ibidorhynchus struthersi, Vigors, P.Z.S. 1831, p. 174; Gould, Cent. B. Himal. Mts. pl. 79; id. B. of As. vii. pl. 61; David and Oust. Ois. Chine, p. 456, pl. 118; Sharpe, Cat. B. Br. Mus. xxiv. p. 335; Blanf. F. Brit. Ind. Birds, iv. p. 249; *Falcirostra kaufmanni* and *longipes*, Severtz. Turk. Jevotn. pp. 69, 146, 147, pl. x. (1873).

♂ *ad.* (Kan-su). Crown, nape, face to the hind part of the eye, fore neck, and a broad band across the breast black; rest of the head and neck blue-grey becoming white where it meets the black; upper parts generally buffy French-grey, becoming bluish on the outer primaries, outer wing-coverts, and rump; upper tail-coverts blackish terminated with blue-grey; tail ashy blue-grey narrowly barred with blackish, and tipped with black, the outer web of the outermost feathers white broadly barred with black; primaries with a white spot near the end of the inner web, largely increasing on the inner quills; under parts, with under wing-coverts and axillaries, pure white; bill curved, deep crimson; legs blood-red; iris crimson. Culmen 3·0, wing 9·3, tail 4·7, tarsus 1·8 inch. Female similar, but with the black portions of the plumage slightly tinged with brown. Young birds lack the blackish on the head and breast.

Hab. Central Asia, from Western Turkestan east to Tibet, Mongolia, and China; the Afridi country, Afghanistan, and the Himalayas from Kashmir to Upper Assam.

Is chiefly to be met with singly or in pairs or small parties on the mountain streams, as high as 12,000 feet, and winters in the mountains in spite of the cold. It is said to be rather shy, and when taking wing utters a loud note, and flies very low, close to the water, following the curves of the stream. It certainly breeds in the Himalayas, but its nesting habits and eggs are as yet unknown.

HYDROCHELIDON, Boie, 1822.

1110. BLACK TERN.

HYDROCHELIDON NIGRA.

Hydrochelidon nigra (Linn.), Syst. Nat. i. p. 227 (1766); (Naum.), x. p. 189, Taf. 256; (Hewitson), ii. p. 488, pl. cxxxv.; (Gould), B. of E. v. pl. 422; id. B. of Gt. Brit. v. pl. 75; Dresser, viii. p. 327, pl. 592; Saunders, Cat. B. Br. Mus. xxv. p. 17; id. Manual, p. 633; Ridgway, p. 46; Lilford, vi. p. i. pl. i.; *S. fissipes*, Lath. Ind. Orn. ii. p. 810 (1790 nec. Linn.)

Guifette noire, French; *Gaivina, Ferreirinho*, Portug.; *Fumarell*, Span.; *Mignattino*, Ital.; *Schwarze-Seeschwalbe*, German; *Zwarte-Zeezwaluw*, Dutch; *Sort-Terne*, Dan. and Norweg.; *Svart-Tärna*, Swed.; *Tschernaya-martyschka*, Russ.

♂ *ad.* (Spain). Crown, nape, and hind neck glossy black; upper parts and tail plumbeous blue-grey; quills darker plumbeous grey; sides of head, throat, and under parts plumbeous black; under wing- and tail-coverts white, the former tinged with grey; bill purplish black; legs blackish brown with a purplish tinge; iris dark brown. Culmen 1·3, wing 8·0, tail 3·25, only moderately forked, tarsus 0·65 inch. Sexes alike. The young bird has the forehead and hind neck white, the upper parts brownish ashy marked with light brown, the fore back blackish and the under parts white, marked with blackish on the sides of the breast, and the adult in winter is similar, but the upper parts are clearer grey and the markings on the sides of the breast are absent.

Hab. Europe generally, north to about 60° N. lat., now only a rare visitant to Britain; Africa in winter to Abyssinia on the east, and Loango on the west side; Asia Minor and Asia east to Western Turkestan. In the New World it is replaced by a nearly allied species, *H. surinamensis* (Gmel.).

As a rule the Black Tern is extremely tame and fearless. On the wing it is extremely graceful and may often be seen hovering over the water for a moment and then pouncing down like a stone on its prey. It feeds chiefly on aquatic insects of various kinds, worms, grubs, &c. It breeds in swamps, making a tolerably well constructed nest of grass and marsh plants, and late in May deposits 3 eggs, which are ochreous clay in ground-colour, sometimes with an olivaceous tinge, marked with purplish grey shell spots, and blackish surface spots and blotches, and measure about 1·49 by 1·0.

1111. WHITE-WINGED BLACK TERN.

HYDROCHELIDON LEUCOPTERA.

Hydrochelidon leucoptera (Schinz.), in Meisn. and Schinz. Vög. der Schweiz. p. 264 (1815); (Naum.), x. p. 215, Taf. 257; (Gould), B. of E. v. pl. 423; id. B. of Gt. Brit. v. pl. 76; Dresser, viii. p. 321, pls. 590, 591; David and Oust. Ois. Chine, p. 524; Saunders, Cat. B. Br. Mus. xxv. p. 6; id. Manual, p. 635; Blanf. F. Brit. Ind. Birds, iv. p. 308; Ridgway, p. 47; Lilford, vi. p. 3, pl. 2; *H. fissipes*, Tacz. F. O. Sib. O. p. 1015.

Hirondelle de mer leucoptère, French; *Fumarell*, Span.; *Mignattino ali-branchi*, Ital.; *Weissflüglige Seeschwalbe*, German.

♂ *ad.* (Algeria). Differs from *H. nigra* in having the upper and under parts deep black; the upper tail-coverts, tail, edge of the wing, and lesser wing-coverts white, the larger coverts French-grey; under tail-coverts white; bill reddish black; legs coral-red; iris dark brown. Culmen 1·1, wing 8·2, tail 3·0, tarsus 0·8, middle toe with claw 0·9 inch. In winter and in immature dress it may be distinguished from *H. nigra* by having the rump and upper tail-coverts almost white, the bill stouter, and the tarsus and foot longer.

Hab. Central and Southern Europe; an irregular visitor to Britain; Africa as far south at least as the Transvaal; Asia Minor and Asia east to China, north to Dauria; Mongolia; Manchuria; Burma; Eastern India and Ceylon; south to Australia and New Zealand; has been obtained in Wisconsin (North America) and Barbadoes.

In habits this Tern resembles *H. nigra*, but its note is louder and harsher, and it is somewhat swifter and more agile on the wing. It breeds in societies in marshy localities, and its nest and eggs resemble those of the Black Tern.

1112. WHISKERED TERN.

HYDROCHELIDON HYBRIDA.

Hydrochelidon hybrida (Pall.), Zoogr. Ross. As. ii. p. 338 (1811); Dresser, viii. p. 315, pls. 588, 589; David and Oust. Ois. Chine, p. 524; Saunders, Cat. B. Br. Mus. xxv. p. 10; id. Manual, p. 537; Blanf. F. Brit. Ind. Birds, iv. p. 307; Lilford, vi. p. 5, pl. 3; *H. leucopareia* (Natterer), in Temm. Man. d'Orn. ii. p. 746 (1820); (Gould), B. of E. v. pl. 424; id. B. of Gt. Brit. v. pl. 77; (Naum.), x. p. 168, Taf. 255; Hewitson, ii. p. 483, pl. cxxxiv. fig. 2; Ridgway, p. 47; *H. fluviatilis*, Gould, P.Z.S. 1842, p. 140; id. B. of Austral. viii. pl. 31.

Hirondelle de mer moustac, French; *Paino mayor*, Span.; *Mignattino bigio*, Ital.; *Weissbärtige Seeschwalbe*, German; *Mershik*, Moor.

♂ *ad.* (S. Spain). Crown and nape glossy black; upper parts and tail slate-grey, rather darker on the primaries; outermost tail-feathers with the outer web white; a white streak from the gape to the nape; chin white, throat grey, darker on the breast, and becoming black on the abdomen and flanks; under wing- and tail-coverts white; bill and legs blood-red; iris dark brown. Culmen 1·45, wing 9·2, tail 3·4, outer tail-feathers 0·7 longer than the middle ones, tarsus 0·9 inch. Sexes alike. In winter the forehead and fore crown are white, the rest of the crown, nape, and hind neck black marked with white, the upper parts paler than in summer, and the under parts white. The young bird is similar, but has the upper parts blotched with blackish.

Hab. Southern, South-western, and Central Europe; a rare straggler to North Germany and Britain; Africa south to the Cape in winter; temperate Asia east to China; Burma, India, and Ceylon, passing south in winter through the Malay Archipelago to Australia; has once been recorded from Barbadoes.

Frequents marshes and inland waters in preference to the sea coasts, and in general habits resembles its allies. It feeds on small fish, caterpillars, aquatic insects of various kinds, leeches, and dragon-flies. It breeds in marshes, in tolerably large colonies, building a somewhat large but clumsy nest of aquatic plants, which is placed on the herbage on the surface of the water, and lays 2 or 3 eggs, which vary in ground-colour from greyish buff or stone-buff to pale greenish or greenish grey, and are marked with purplish grey shell blotches, and blackish brown surface spots and blotches; in size they measure about 1·52 by 1·12.

STERNA, Linn., 1766.

1113. ARCTIC TERN.

STERNA MACRURA.

Sterna macrura, Naum. Isis, 1819, p. 1847; id. x. p. 114, Taf. 253; Gould, B. of Gt. Brit. v. pl. 72; Saunders, Cat. B. Br. Mus. xxv. p. 62; id. Manual, p. 649; Lilford, vi. p. 20, pl. 9; *S. paradisea*, Brünn. Orn. Bor. p. 46 (1764); Ridgway, p. 43; Tacz. F. O. Sib. O. p. 1008; *S. hirundo*, Müller, Zool. Dan. Prod. p. 170 (1774); Dresser, viii. p. 255, pl. 579; *S. arctica*, Temm. Man. d'Orn. ii. p. 742 (1820); Audub. B. Am. pl. 250; Gould, B. of E. v. pl. 419; Hewitson, ii. p. 481, pl. cxxxiii. figs. 1, 2.

Sterne paradis, French; *Gaivina*, Portug.; *Gavina*, Span.; *Rondine di mare artica*, Ital.; *Küsten-Meerschwalbe*, German; *Kyst-Terne*, Dan.; *Rödnæbbet-Terne*, Norweg.; *Rödnäbbad-Tärna*, Swed.; *Cerrik*, Lapp.; *Lapintirra*, Finn.; *Krashka morskaya*, Russ.

♂ *ad.* (Scotland). Crown black; upper parts delicate silver-grey; quills dark grey, the outer web of the first blackish; secondaries tipped with white; tail white, the outer webs of the two longest feathers dark grey; chin, sides of face, under wing- and tail-coverts white; rest of under parts silver-grey; bill and legs coral-red; iris blackish brown. Culmen 1·3, wing 10·4, tail 8·0, tarsus 0·55 inch. Sexes alike. In winter the forehead and crown are mottled with white, and the under parts are paler.

Hab. The high northern portions of the Old and New Worlds, nesting north to 82° N. lat. or even higher; in winter passing south to South Africa, South Asia, and South America as far as 66° S. lat. in the Southern Ocean.

Frequents the sea coasts and islands off the coast, and is noisy but not shy. Its flight is extremely buoyant, easy, and graceful, and it will sometimes alight on the water and swim, and will even dive. It feeds on small fish, shrimps, and crustaceans of various kinds, and its note is recognizable from that of the Common Tern by a practised ear, being a somewhat plaintive *keer, keer,* or *kee, kee, kee,* or *gip, gip, gip, gip,* often modulated. It usually breeds close to the sea, but in some parts on the borders of inland lakes, making no nest, but depositing its 2 or 3 eggs on the sand, shingle, or on dry seaweed or grass; these, which are usually deposited in June or July, according to latitude, vary in ground-colour from white to stone-grey, pale blue-green and rich greenish, and are spotted and blotched with umber-brown or blackish brown surface-markings and pale purplish shell-blotches; in size they measure about 1·45 by 1·11.

1114. COMMON TERN.

STERNA FLUVIATILIS.

Sterna fluviatilis, Naum. Isis, 1819, pp. 1847–1848; Dresser, viii. p. 263, pl. 580; David and Oust. Ois. Chine, p. 525; Saunders, p. 647; id. Cat. B. Br. Mus. xxv. p. 54; Tacz. F. O. Sib. O. p. 1010; Blanf. F. Brit. Ind. Birds, iv. p. 318; *S. hirundo* (partim), Linn. Syst. Nat. i. p. 227 (1766); Audub. B. N. Am. pl. 309; Naum. x. p. 89, Taf. 252; Hewitson, ii. p. 480, pl. cxxxiii. fig. 3; Gould, B. of E. v. pl. 417; id. B. of Gt. Brit. v. pl. 70; Ridgway, p. 43; Lilford, vi. p. 17, pl. 8.

Pierre Garin, French; *Gaivina, Andorhina do mar,* Portug.; *Gavina,* Span.; *Rondina di mare,* Ital.; *Fluss Meerschwalbe,* German; *Vischdiefje,* Dutch; *Almindelig-Terne,* Dan.; *Makrel-Terne,* Norweg.; *Fisktärna,* Swed.; *Kalatirra,* Finn.; *Krashkarashnaya,* Russ.

♂ *ad.* (England). Differs from *S. macrura* in having the under parts vinaceous grey, paler, the chin and cheeks white, the dark bands on the inner webs of the primaries wider and darker, and the outermost tail-feathers shorter; bill coral-red, blackish at the tip; legs coral-red; iris dark brown. Culmen 1·5, wing 10·5, tail 5·6, tarsus 0·7 inch.

Hab. Europe generally, but not ranging so far north as *S. macrura*; migrating south down to South Africa in winter;

temperate Asia, passing south on passage and in winter to China, India, and the Malay Peninsula; North America from Labrador to Texas, ranging south to Bahia, Brazil, in winter; rare on Pacific coasts.

In habits the Common Tern does not differ from the Arctic Tern, but it is less marine in the choice of habitat and is often found on rivers, lakes, and inland ponds. Its food and nest are also similar, but its note is somewhat harsher. Its eggs resemble those of *S. macrura*, and are also subject to considerable variation, but are as a rule a trifle larger, averaging about 1·59 by 1·19.

1115. Nordmann's Tern.

STERNA LONGIPENNIS.

Sterna longipennis, Nordmann, in Ermans Reise, p. 17 (1835); Middend. Sib. Reise, p. 246, Tab. 25, fig. 4; David and Oust. Ois. Chine, p. 526; Seebohm, B. Jap. Emp. p. 296; Saunders, Cat. B. Br. Mus. xxv. p. 67; Blanford, F. Brit. Ind. Birds, iv. p. 319; *S. camtschatika*, Kittlitz, Denkw. Reise, i. p. 322, and ii. p. 200 (1858); Tacz. F. O. Sib. O. p. 1011.

♂ *ad.* (Amoor). Intermediate between *S. fluviatilis* and *S. macrura*, having like the former the under parts vinaceous grey; the upper parts slightly darker than the latter species; stripe on the inner web of outer primaries as broad as in *S. fluviatilis;* bill black; legs blackish; iris dark brown. Culmen 1·6, wing 10·6, tail 7·1, tarsus 0·75 inch.

Hab. Eastern Siberia, north to Kamchatka; Japan; China; Ceylon; in winter migrating as far south as New Guinea.

In habits, food, and nidification, this Tern does not differ from *S. macrura*. Its eggs, from Kamchatka, are described as being rather less marked than those of that species, and measure about 1·55 by 1·12.

1116. Roseate Tern.

STERNA DOUGALLI.

Sterna dougalli, Montag. Orn. Dict. Suppl. (1813); Naum. x. p. 78, Taf. 251; Hewitson, ii. p. 479, pl. cxxxii. fig. 1; Gould, B. of E. v. pl. 418; Dresser, viii. p. 273, pl. 581; Saunders, Cat. B. Br. Mus. xxv. p. 70; id. Manual, p. 645; Lilford, vi. p. 15, pl. 7; Blanford, F. Brit. Ind. Birds, iv. p. 319; Ridgway, p. 44; *S. paradisea*, Keys. and Blas. Wirbelth. Eur. p. 247 (1840, nec. Brünn.); Gould, B. of Gt. Brit. v. pl. 71; Tacz. F. O. Sib. O. p. 1008; *S. gracilis*, Gould, P.Z.S. 1845, p. 76; id. B. of Austral. vii. pl. 27.

Sterne de Dougall, French; *Paradies-Meerschwalbe*, German; *Dougalls-Terne*, Dan.

♂ *ad.* (Massachusetts). Crown and nape glossy black; upper parts light French-grey; the rump, upper tail-coverts, and tail white washed with grey; rest of plumage white; under parts tinged with delicate rose-colour; first primary with the outer web blackish; bill orange-red at the base, otherwise black; legs orange-red; iris dark brown. Culmen 1·7, wing 9·0, tail 9·0, the lateral feathers extending nearly 6 inches beyond the middle ones, tarsus 0·8 inch. Sexes alike. In winter the forehead is white, the crown and nape brownish black marked with white, the bill nearly black, and the under parts lack the rose tinge.

Hab. Europe, north to Britain, and rarely to Denmark; somewhat rare in South Europe, but has been recorded from South Africa and the Azores; the coasts of Asia north to the Loo-choo Islands; China, Ceylon, the Andamans; Malaysia, south to Australia and New Caledonia; Eastern America from Massachusetts to Venezuela; West Indies, and the Antilles.

In general habits it resembles the Common and Arctic Terns, but its cry is easily distinguishable from either of those. It is essentially an oceanic species, and its breeding range is very wide. Its eggs, 2 to 3 in number, are deposited on the ground on the coast, in sandy localities, and on small islands, and resemble those of the Common and Arctic Terns, but are as a rule more elongate in shape, and measure about 1·67 by 1·18.

1117. ALLIED TERN.

STERNA MEDIA.

Sterna media, Horsf. Tr. Linn. Soc. xiii. p. 198 (1820); Dresser, viii. p. 285, pl. 583; Saunders, Cat. B. Br. Mus. xxv. p. 86; Blanf. F. Brit. Ind. Birds, iv. p. 313; *S. affinis*, Cretzschm. in Rüpp. Atlas, p. 23, Tab. 14 (1826); *S. bengalensis*, Lesson, Traité d'Orn. p. 621 (1831); *S. torresii*, Gould, P.Z.S. 1842, p. 140; id. B. of Austral. vii. pl. 25.

♂ *ad.* (Egypt). Crown and nape deep black, the nuchal feathers elongated; neck, fore back, chin, throat, and under parts white; mantle ashy grey; rump and tail pearly ash-grey, the outermost tail-feathers white; quills hoary grey on the outer web, the inner web blackish near the shaft and tip, otherwise white; bill yellow with a greenish tinge; legs and toes black, the soles pale yellowish; iris brown. Culmen 2·5, wing 11·6, tail 6·3, outer feathers 3 inches longer than the middle ones, tarsus 1·05 inch. In winter the forehead is dull hoary grey, the crown white closely spotted with black, the nape black.

Hab. Mediterranean, from the Straits of Gibraltar, where it is somewhat rare, to Egypt; the Red Sea down to Madagascar; coasts of Persian Gulf, Indian Ocean, India, Ceylon, and Burma (rarely), ranging south to Malacca, Sumatra, Java, Celebes, and North Australia.

In general habits it appears to resemble the Sandwich Tern. It frequents the sea coasts and small islands, and is very gregarious, being usually seen in large flocks, and like its allies feeds on small fish. It breeds in colonies, the nest being a mere depression near the shore, usually in sand, and the eggs, 2 in number, are in general character like those of the Sandwich Tern, are dull white, glossless, with purplish grey shell-markings, and dark brown surface spots, and measure about 2·18 by 1·56.

1118. SANDWICH TERN.

STERNA CANTIACA.

Sterna cantiaca, Gmel. Syst. Nat. i. p. 606 (1788); Naum. x. p. 50, Taf. 250; Hewitson, ii. p. 478, pl. cxxxii. figs. 2, 3; Gould, B. of E. v. pl. 415; (id.), B. of Gt. Brit. v. pl. 69; Audub. B. of Am. pl. 279; Dresser, viii. p. 301, pl. 586; Saunders, Cat. B. Br. Mus. xxv. p. 75; id. Manual, p. 643; Blanf. F. Brit. Ind. Birds, iv. p. 312; Lilford, vi. p. 13, pl. 6; *S. acuflavida*, Cabot, Proc. Bost. Soc. ii. p. 257 (1847); Ridgway, p. 40.

Hirondelle de mer caugek, French; *Garajau*, Portug.; *Golondrina de mar*, Span.; *Beccapesci*, Ital.; *Brand-Meerschwalbe*, German; *Groote-zeezwaluw*, Dutch; *Kentisk-Terne*, Dan.

♂ *ad.* (Turkey). Head to below the eye and nape glossy black, the nuchal feathers elongated; a white line from the nostril along the edge of the upper mandible; mantle plain French-grey; primaries with white margins to the inner webs; tail white; under parts white with a very faint pink tinge; bill black, the tip yellow; legs black; iris dark brown. Culmen 2·35, wing 12·1, tail 6·8, the outer feathers 3·4 longer than the middle ones, tarsus 1·1 inch. In winter the forehead is white, the crown and nape white closely spotted with black; a blackish spot before the eye.

Hab. Europe, but not extending north above Britain or Denmark, and a very rare straggler to Southern Sweden; on passage, and in winter ranging as far south as the Canaries and the Cape of Good Hope; Asia, east to Sind; the Atlantic coasts of North America, Cuba, Jamaica, both sides of Central America, and as far south as Bahia in Brazil.

Is essentially a marine bird, frequenting the coast, but has been recorded as nesting near salt water on a moorland loch, yet this is very exceptional. It feeds, like its allies, on small fish, its flight is strong and rapid, and its note is a loud harsh *kirrhitt, kirhitt.* It nests in communities, usually in sandy places near the sea, its 2 or 3 eggs being deposited in a depression in the ground, usually in May or June. These are subject to considerable variation, the ground-colour varying from white to stone-buff, the shell-markings being purplish or pale brownish grey, and the surface spots and blotches, which are in some more pronounced than in others, are blackish brown; some have peculiar hieroglyphic streaks, as if drawn with a pen. In size they measure about 2·05 by 1·42.

1119. CASPIAN TERN.

STERNA CASPIA.

Sterna caspia, Pall. Nov. Comm. Petrop. xiv. p. 582, tab. xxii. fig. 2, (1770) ; Naum. x. p. 18, Taf. 248 ; Hewitson, ii. p. 477, pl. cxxxi. figs. 2, 3 ; Gould, B. of E. v. pl. 414 ; (id.), B. of Gt. Brit. v. pl. 68 ; Dresser, viii. p. 289, pl. 584 ; (David and Oust.), Ois. Chine, p. 522 ; (Saunders), Cat. B. Br. Mus. xxv. p. 32 ; id. Manual, p. 641 ; Lilford, vi. p. 11, pl. 5 ; (Blanf.), F. Brit. Ind. Birds, iv. p. 309 ; (Tacz.), F. O. Sib. O. p. 1006 ; *S. tschegrava*, Lepechin, Nov. Comm. Petrop. xiv. p. 500 (1770) ; Ridgway, p. 39 ; *S. strenuus* (Gould), P.Z.S. 1846, p. 21 ; (id.), B. of Austral. vii. pl. 22.

Sterne tschegrava, French ; *Garnica*, Span. ; *Beccapesci maggiore*, Ital. ; *Raub-Meerschwalbe*, German ; *Reus-Zeezwaluw*, Dutch ; *Rov-Terne*, Dan. ; *Skräntärna*, Swed. ; *Raukutirra*, Finn. ; *Krashka-tschegrava*, Russ. ; *Abou-Belaha*, Arab. ; *Kekra*, in Sind.

♂ *ad.* (Dobrudscha). Crown to just below the eye and nape glossy black ; nuchal feathers elongated ; mantle French-grey ; rest of upper parts, tail, and under parts white ; quills hoary grey, the margins of the inner webs slate-grey ; bill bright coral-red ; blackish at the tip ; legs black ; iris dark brown. Culmen 2·9, wing 15·5, tail 6·0, outer feathers 1·3 longer than the middle ones, tarsus 1·8 inch. In winter the crown is white striped with black ; a blackish patch in front of the eye ; bill orange-red, tipped with horn-colour.

Hab. Europe, north to the head of the Gulf of Bothnia ; an irregular visitor to England ; Africa south to the Cape and Madagascar ; Asia, north to Southern Dauria, east to China, south to India, Ceylon, and Burma ; the Malay Archipelago, Australia, and New Zealand ; North America generally, rarer on the Pacific coast, ranging south in winter to Florida on the east and Mexico on the west side.

Frequents the sea coasts, seldom inland waters. It feeds chiefly on fish, but is said also to sometimes devour young birds of the smaller Terns. Its note is a loud, deep, harsh *craak, craa.* It breeds either in pairs or in communities, placing its eggs on the ground; these, 2 to 3 in number, are usually deposited late in May or early in June, and vary in ground-colour from stone-grey to stone-buff with a greenish tinge, and are marked with purplish grey shell blotches, and blackish-brown surface spots, blotches, and blotchy lines. In size they measure about 2·45 by 1·75.

1120. Royal Tern.

STERNA MAXIMA.

Sterna maxima, Bodd. Tabl. Pl. Enl. p. 58, No. 988 (1783); Dresser, ix. p. 383, pl. 716; Saunders, Cat. B. Br. Mus. xxv. p. 80; Ridgway, p. 40; *S. cayennensis*, Gmel. Syst. Nat. i. p. 604 (1788); Audub. B. Amer. pl. 273; *S. regia*, Gambel. Pr. Phil. Acad. iv. p. 228 (1848).

♂ *ad.* (S. Carolina). Crown and nape black, the nuchal feathers elongated and pointed; neck, edge of wing from carpus, tail, and under parts white; mantle pearl-grey, the rump paler grey; outer webs of primaries dark grey, a broad line near the shaft, and ends of inner webs blackish grey; bill orange-red; legs black; iris brown. Culmen 2·8, wing 14·3, tail 6·2, outer feathers extending 2·0 beyond the middle ones, tarsus 1·35 inch. In winter the forehead and fore crown are white mottled with black, and a small space at the base of the bill dull grey; bill paler orange.

Hab. America, on the east side from Long Island to Southern Brazil, possibly to Parana, on the west side from California to Peru; West Coast of Africa from the Straits of Gibraltar to Angola.

In general habits it resembles *S. caspia*, but is said to swim very rarely. It breeds near the sea, usually in sandy places, laying 2 eggs, which are buffy white or pale yellowish, somewhat sparsely spotted with purplish grey and dark umber, and measure about 2·59 by 1·71.

1121. Gull-billed Tern.

STERNA ANGLICA.

Sterna anglica, Montag. Orn. Dict. Suppl. fig. (1813); Naum. x. p. 38, Taf. 249; Hewitson, ii. p. 476, pl. cxxxi. fig. 1; Gould, B. of E. v. pl. 416; (id.), B. of Gt. Brit. v. pl. 74; Dresser,

viii. p. 295, pl. 585; (Saunders), Cat. B. Br. Mus. xxv. p. 25; id. Manual, p. 639; Lilford, vi. p. 9, pl. 4; *S. aranea*, Wils. Am. Orn. viii. p. 143, pl. 72, fig. 6 (1814); ? *S. nilotica*, Gmel. Syst. Nat. i. p. 606 (1788); (Ridgway), p. 38; *S. macrotarsa*, Gould, P.Z.S. 1837, p. 26; (id.), B. of Austral. Suppl. pl. 81; Tacz. F. O. Sib. O. p. 1004.

Sterne hansel, French; *Golondrina de mar*, *Cagará*, Span.; *Beccapesci-inglese*, Ital.; *Lach-meerschwalbe*, German; *Lach-Zeezwaluw*, Dutch; *Engelsk-Terne*, Dan.; *Tschernonosaya-Martyschka*, Russ.

♂ *ad.* (Turkey). Crown and nape glossy black leaving a white line along the edge of the gape; chin, throat, sides of neck and under parts white; upper parts with the tail pale bluish pearl-grey; quills towards the tip and the inner web blackish grey, lighter in the centre; bill and legs black; iris brown. Culmen 1·6, wing 11·65, tail 5·0, lateral tail-feathers 1·6 inch longer than the middle ones, tarsus 1·2. In winter the forehead is white, the nape greyish white striped with black; space before the eye marked with black; behind the eye a blackish stripe.

Hab. Europe, to about 55° N. lat. in summer; a rare straggler to Great Britain, but nests on the island of Sylt; Northern Africa down to below Kordofan; temperate and Southern Asia, north to Mongolia; Manchuria; in winter somewhat irregularly distributed in Burma, India, and Ceylon, and ranging as far south as Australia, where it breeds.

In habits it somewhat resembles *S. cantiaca*, but is more Gull-like, and its note, *ef ef*, or *af af*, is much more like that of a Gull. It feeds also largely on insects, orthoptera, coleoptera, and lepidoptera, locusts and grasshoppers. It breeds in communities, the nest being a mere depression in the sand or soil, sometimes with a scanty lining of straws, and in May or early in June deposits 2 to 3, rarely 4 eggs. These vary in ground-colour from stone-ochre and greyish white to pale greenish brown marked with pale greyish brown shell spots, and greenish or reddish brown surface spots and blotches, and measure about 1·85 by 1·36.

1122. LITTLE TERN.

STERNA MINUTA.

Sterna minuta, Linn. Syst. Nat. i. p. 228 (1766); Naum. x. p. 145, Taf. 254; Hewitson, ii. p. 484, pl. cxxxiv. fig. 1; Gould, B. of E. v. pl. 420; (id.), B. of Gt. Brit. v. pl. 73; Dresser, viii. p. 279, pl. 582; Saunders, Cat. B. Br. Mus. xxv. p. 116; id. Manual, p. 651; Blanford, F. Brit. Ind. Birds, iv. p. 321; Lilford, vi. p. 21, pl. 10.

Sterne naine, French; *Catalinita, Moncheta*, Span.; *Fraticello*, Ital.; *Zwerg-Meerschwalbe*, German; *Dwerg-zeezwaluw*, Dutch; *Dværg-Terne*, Dan.; *Småtärna*, Swed.; *Malaya-Martyschka, Malaya-Kraschka*, Russ.

♂ *ad.* (England). Forehead white; a stripe from the base of the bill through the eye, crown, and nape deep black; mantle and upper rump dark pearl-grey; lower rump, tail-coverts, tail, and entire under parts pure white; first three primaries with blackish shafts, and blackish in colour, broadly margined on the inner web with white; bill yellow tipped with black; legs light orange; iris brown. Culmen 1·4, wing 6·75, tail 3·8, the lateral feathers 1·95 longer than the middle ones, tarsus 0·6 inch. In winter the upper parts are rather darker, and more white on the forehead.

Hab. Europe generally, from Southern Sweden to the Mediterranean, but rarer in the north; Britain in summer; North Africa and the West Coast down to the Cape in winter; Asia east to India and Burma, and south in winter as far as Java. In America it is replaced by a nearly allied species, *S. antillarum.*

In general habits it differs but little from the Common Tern, and is equally graceful on the wing. It usually frequents the sea coasts, though it is not unfrequently seen on inland waters. Its food consists of small fishes, aquatic insects, and larvæ, and its note is a shrill, somewhat harsh *kreek*, or *kree.* Its 2 to 3 eggs are deposited on the sand or shingle, usually late in May or early in June, and are greyish yellow or stone-ochre in ground-colour, somewhat sparingly covered with violet-grey shell-markings and blackish brown surface spots, and measure about 1·28 by 0·92.

The young of this and all the preceding Terns resemble the adult in winter dress, but have the upper parts marked or mottled with buff, dusky brown, or blackish.

1123. ASIATIC LITTLE TERN.

STERNA SINENSIS.

Sterna sinensis, Gmel. Syst. Nat. i. p. 608 (1788); (David and Oust.), Ois. Chine, p. 527; (Seebohm), B. Jap. Emp. p. 298; Saunders, Cat. B. Br. Mus. xxv. p. 113; (Tacz.), F. O. Sib. O. p. 1014; Blanf. F. Brit. Ind. Birds, iv. p. 320; *Sternula placens*, Gould, Ann. Nat. Hist. viii. p. 192 (1871); id. B. N. Guin. v. pl. 72.

♂ *ad.* (China). Differs from *S. minuta* in being larger, in having the shafts of the primaries white, the outer web of the first, and inner web near the shaft dark grey, the upper tail-coverts and tail pure white, and the outer tail-feathers longer. Culmen 1·5, wing 7·4, tail 5·6, the outer feathers 3·3 longer than the middle ones, tarsus 0·65 inch.

Hab. Ceylon, Burma, and China, east to Japan; Malaysia down to New Guinea, Australia, and New South Wales.

In habits it does not appear to differ from *Sterna minuta*, frequenting similar localities and feeding also on small fish and small crustaceans, &c. It breeds on sand-banks in rivers and on the coast, in March and April in Pegu, and from June to August in Ceylon, depositing its 2 to 3 eggs on the ground. The eggs vary in ground-colour from stone-grey to yellowish or pale brownish buff and olivaceous grey, the shell-markings being bluish inky and purplish grey and the surface blotches of dark sepia and brown of various shades; in size they measure about 1·24 by 0·94.

1124. Aleutian Tern.

STERNA ALEUTICA.

Sterna aleutica, Baird, Trans. Chicago Acad. 1869, p. 321, pl. 31, fig. 1; Saunders, Cat. B. Br. Mus. xxv. p. 98; Ridgway, p. 45; Seebohm, B. Jap. Emp. p. 299; Tacz. F. O. Sib. O. p. 1013.

♂ *ad.* (Alaska). Crown, nape, and loral streak black; middle of forehead back to the eye white; mantle slate-grey; rump, tail, chin, lower cheeks, under wing- and tail-coverts white; primaries dark grey, the outer web of the first blackish, a dark line on the inner web next the white shaft; white wedges to the four outer primaries; secondaries edged with white; abdomen and breast pale slate-grey; bill and legs black; iris dark brown. Culmen 1·5, wing 10·65, tail 6·5, lateral tail-feathers 3·6 longer than the middle ones, tarsus 0·75 inch. In winter there is more white on the forehead.

Hab. Alaska; both sides of the Bering Sea; the Aleutian Islands; Saghalien and South-eastern Japan.

In habits it is said to resemble the Arctic Tern, but its note is weaker and more squeaky. It deposits its 1 to 2 eggs on the ground, and these resemble those of the Arctic Tern, but are darker in ground-colour and more boldly marked; in size they measure about 1·6 by 1·15.

1125. SOOTY TERN.

STERNA FULIGINOSA.

Sterna fuliginosa, Gmel. Syst. Nat. i. p. 605 (1788) ; Naum. xiii. p. 267, Taf. 387 ; Wils. Am. Orn. viii. p. 145, pl. 72, fig. 1 ; Gould, B. of Austral. vii. pl. 32 ; Temm. and Schlegel, Faun. Jap. Aves, p. 133, pl. 89 ; (David and Oust.), Ois. Chine, p. 528 ; Dresser, viii. p. 307, pl. 587 ; Saunders, Cat. B. Br. Mus. xxv. p. 106 ; id. Manual, p. 653 ; Ridgway, p. 45 ; Lilford, vi. p. 26, pl. 11 ; Blanf. F. Brit. Ind. Birds, iv. p. 324.

♂ *ad.* (Florida Keys). Forehead, sides of head to the eye, chin, throat, and entire under parts white ; crown, a stripe from the base of the bill through the eye, nape, hind neck, and upper parts, with the tail black, the mantle tinged with brown ; the outermost feather on each side of the tail greyish black towards the end of the inner web, otherwise white ; bill and legs black ; iris reddish brown. Culmen 1·9, wing 11·2, tail 7·0, tarsus 0·92 inch. In winter the lores and crown are marked with white.

Hab. Atlantic, chiefly on the southern islands, the southern coasts of North America, and as far south as Chili ; several parts of the African coasts ; rarer on the coasts of Asia, but is found as far south as Australia ; very rare on the Pacific coasts of America, but has been recorded from the Aleutian Islands and Western Mexico. Has been obtained three times in England, and thrice on the continent of Europe.

Is essentially a marine bird, and nests in large communities on many of the tropical and subtropical islands, depositing as a rule a single egg on the ground. The eggs are white or cream-buff in ground-colour, the shell-markings purplish grey, and the surface spots and blotches deep red ; some are but slightly marked, but others are very boldly blotched. In size they measure about 2·0 by 1·39.

1126. PANAYAN TERN.

STERNA ANÆSTHETA.

Sterna anæstheta, Scop. Del. Faun. et Flor. In. i. p. 92, No. 72 (1786) ; Seebohm, B. Jap. Emp. p. 301 ; Saunders, Cat. B. Br. Mus. xxv. p. 101 ; Blanf. F. Brit. Ind. Birds, iv. p. 323 ; *S. panaya*, Lath. Ind. Orn. p. 808 (1790) ; (Gould), B. of Austral. vii. pl. 33.

♂ *ad.* (Paternoster Island). Differs from *S. fuliginosa* in being smaller, in having the hind neck and fore back greyish white, the upper parts paler, blackish slate, and the webbing of the feet different, not continued to the claws, but only to the last joint of the toes. Culmen 1·7, wing 10·3, tail 8·3, tarsus 0·8 inch.

Hab. Tropical seas generally; both coasts of Africa, south to Madagascar and the Mascarene Islands; the Indian Ocean and China Seas, north to Japan, and south to New Guinea, North Australia, the Fiji, Tonga, Ellice, and Phœnix Groups; of accidental occurrence on the coasts of Florida, and is said to have once occurred at the mouth of the Thames.

In general habits it resembles *S. fuliginosa,* but does not breed in such large colonies, its single egg being laid on the sand or ground, or in holes in the coral or sandstone, in May. The eggs resemble those of *S. fuliginosa,* but are rather smaller and less boldly marked.

ANOUS, Steph., 1826.

1127. NODDY.

ANOUS STOLIDUS.

Anous stolidus (Linn.), Syst. Nat. i. p. 227 (1766); (Audub.), B. Am. pl. 275; (Gould), B. of E. v. pl. 421; (Hewitson), ii. p. 486, pl. cxxxiv. fig. 3; (Seebohm), B. Jap. Emp. p. 300; Gould, B. of Austral. vii. pl. 34; David and Oust. Ois. Chine, p. 529; Saunders, Cat. B. Br. Mus. xxv. p. 136; id. Manual, p. 655; Ridgway, p. 48; Lilford, vi. p. 29, pl. 13; Blanf. F. Brit. Ind. Birds, iv. p. 325.

♂ *ad.* (Brit. Honduras). Forehead nearly white; crown pale grey passing into greyish brown on the nape; lores and orbital region black; cheeks and throat plumbeous; rest of plumage above and below chocolate-brown; wings and tail blackish; bill black, orange at the angle of the gape; legs dusky vinous purple; iris deep brown. Culmen 2·1, wing 10·15, tail 6·2, tarsus 1·0 inch.

Hab. Tropical and subtropical seas; the Atlantic and Pacific coasts of America down to Tristan da Cunha in the Atlantic; the coasts of tropical and subtropical Africa, and of Asia north to Japan; Australia down to about 35° S. lat.; islands of the Pacific up to Laysan, &c., and down to the Galapagos, but not Peru or Chile; is said to have been obtained off the south-east coast of Ireland.

Is essentially an oceanic species. It feeds on small fish, mollusca, medusæ, &c. Unlike the other Terns, it constructs a somewhat bulky nest of twigs, grass, or seaweed, which is placed on a bush or tree, and deposits 1 egg only, which is laid from January to May and September, according to latitude. The eggs are dull and glossless in texture, white, muddy white, or buffy white in ground-colour, sparingly marked with pale purplish grey shell spots and reddish brown or dark brown surface spots, and measure about 2·06 by 1·38.

XEMA, Leach, 1819.

1128. Sabine's Gull.

XEMA SABINII.

Xema sabinii (J. Sabine), Trans. Linn. Soc. xii. p. 520, pl. 29 (1818); (Middendorff), Sib. Reise, p. 244, Tab. xxiv. fig. 5, pull.; Tab. xxv. fig. 1, egg (1853); (Naum.), xiii. p. 272, Taf. 272, figs. 3, 4; (Gould), B. of E. v. pl. 429; id. B. of Gt. Brit. v. pl. 67; Newton, P.Z.S. 1871, p. 57, pl. iv. fig. 5 (egg); Dresser, viii. p. 337, pl. 593; Saunders, Cat. B. Br. Mus. xxv. p. 162; id. Manual, p. 657; Ridgway, p. 38; Lilford, vi. p. 32, pl. 14; Tacz. F. O. Sib. O. p. 1046.

♂ *ad.* (Arctic America). Head and upper neck rich dark plumbeous bordered below with black; mantle pale blue-grey; edge of the wing and first five quills black, the latter margined on the inner web, and tipped with white; secondaries and their coverts blue-grey tipped with white; rest of plumage and the tail white; the latter slightly forked; bill blackish, tipped with orange on the upper, and yellow on the lower mandible; edge of eyelids and gape vermilion; legs blackish; iris light brown. Culmen 1·3, wing 11·0, tail 4·6, tarsus 1·4 inch. Sexes alike. In winter the head and neck are white, the ear-coverts and back of head and neck dusky plumbeous. The young have the mantle brownish grey marked with pale brown and dirty white, the crown brownish ashy, and the tail crossed by a subterminal black band.

Hab. The most northern parts Arctic regions of the Old and New Worlds, visiting the British Isles, where it has been obtained on many occasions, the coasts of the North Sea to Norway, Denmark, Holland, N. Germany, and France, and has been recorded from as far south as Switzerland, Austria, and Hungary; in America it has been obtained on the Atlantic side as far south as the Bermudas and Texas, and on the Pacific it visits the coasts of Peru to Callao Bay in numbers. So far as is known, it breeds only from the Taimyr to the Yukon, not in Spitsbergen or Greenland.

In general habits and especially in its flight this Gull is very Tern-like, and in the breeding season associates with the Arctic Tern. It feeds chiefly on insects of various kinds in the breeding season, and small fish and crustaceans in the winter. It breeds in the high north, its nest being a depression in the moss, and its 2 eggs, which are laid late in June or early in

July, are dull brownish olivaceous, indistinctly blotched, chiefly at the larger end, with dull brown, and measure about 1·72 by 1·30.

RHODOSTETHIA, Macgill., 1842.

1129. Cuneate-tailed Gull.

RHODOSTETHIA ROSEA.

Rhodostethia rosea (Macgill.), Mem. Wern. Soc. v. No. xiii. p. 249 (1824) ; Dresser, viii. p. 343, pl. 594 ; Murdoch, Exp. Pt. Barrow, p. 123, pls. i. ii. ; Saunders, Cat. B. Br. Mus. xxv. p. 167 ; id. Manual, p. 659 ; Tacz. F. O. Sib. O. p. 1048 ; Ridgway, p. 37 ; Lilford, vi. p. 33, pls. 15, 16 ; *L. rossii*, Richardson, App. Parry's Second Voy. p. 359 (1825) ; Naum. xiii. p. 270, Taf. 388, figs. 3, 4 ; (Gould), B. of Gt. Brit. v. pl. 63.

♂ *ad.* (Disco). Mantle pearl-grey ; primaries rather darker, the first with the outer web black nearly to the tip ; secondaries tipped with white ; rest of the plumage, and tail, which is cuneate, white, the under parts tinged with rose-pink ; middle of neck encircled by a black band, broadest behind ; bill blackish ; legs coral-red ; iris dark brown. Culmen 0·95, wing 10·1, tail 4·4, the middle feathers 0·8 longer than the outermost, tarsus 1·1 inch. Sexes alike. In winter the black collar is absent, and the under parts are quite white. The young bird has the crown and hind neck clouded with dusky, the upper parts marked with sooty blackish and buff, and the tail terminated with blackish brown.

Hab. Franz Josef's Land and the Polar seas ; straying south in autumn and winter, and has been then recorded once from Yorkshire, several times from Greenland, once from the Færoes, once from Heligoland, once from St. Michael's, Alaska, and numbers have been obtained at Point Barrow; in Asia it inhabits the Arctic Ocean.

But little is known respecting the habits of this Gull, and its nest and eggs have not been discovered.

PAGOPHILA, Kaup, 1829.

1130. Ivory Gull.

PAGOPHILA EBURNEA.

Pagophila eburnea (Phipps), Voy. N. Pole, App. p. 187 (1774) ; (Naum.), x. p. 341, Taf. 263 ; Carte, Journ. R. Dubl. Soc. i. pp. 57, 60, pls. 1, 2 (eggs) ; (Gould), B. of E. v. pl. 437 ; id. B. of Gt. Brit. v. pl. 62 ; (Audubon), B. Am. vii. pl. 445 ; Dresser, viii. p. 349, pl. 595 ; Saunders, Cat. B. Br. Mus. xxv. p. 301 ; id. Manual, p. 685 ; Collett, Ibis, 1888, p. 440, pl. xiii. (nestling and eggs) ; Lilford, vi. p. 68, pl. 30 ; ? *L. albus*, Gunnerus, in Leems. Beskrif. Lappl. p. 285 (1767) ; (Tacz.), F. O. Sib. O. p. 1055 ; Ridgway, p. 24.

Mouette blanche, French; *Schnee-Mewe, Elfenbein-Mewe,* German; *Iismaage,* Dan. and Norweg.; *Hvitmåse,* Swed.; *Valkealokki,* Finn.

♂ *ad.* (Spitsbergen). Entire plumage white; bill French-grey at the base and on the culmen, pea-yellow at the tip; legs and feet black; iris dark hair-brown, eyelids brick-red. Culmen 1·5, wing 12·2, tail 5·9, tarsus 1·5 inch. Sexes alike. The young bird is marked with blackish grey.

Hab. The most northern parts of the Polar world, straying south in winter to Britain, Scandinavia, the coasts of Germany and Holland; has once been obtained at the mouth of the Somme in France, and once near Lausanne in Switzerland. In North Asia it occurs in Kamchatka, and throughout Arctic America as far south as New Brunswick and Newfoundland as a rare visitant.

Is generally to be met with in the vicinity of ice-masses, and feeds chiefly on the leavings of walrus and seal hunters, and is very tame and confiding. McClintock found it breeding on Prince Patrick's Island in 1852–53, Malmgren in N.E. Spitsbergen in 1865, and Capt. Johannesen found a breeding colony on a small island off Spitsbergen in August, 1887, and obtained 19 eggs. The nests were composed of green moss, a few stalks and leaves of algæ, a few small wood splinters, feathers, and one or two particles of lichen. The eggs, 1 or 2 in number, are light greyish brown with a faint admixture of yellowish green in ground-colour, and are spotted and blotched with dark brown, and most nearly resemble those of *Larus canus.* In size they measure about 2·36 by 1·32.

RISSA, Stephens, 1826.

1131. KITTIWAKE.

RISSA TRIDACTYLA.

Rissa tridactyla (Linn.), Syst. Nat. i. p. 224 (1766); (Naum.), x. p. 322, Taf. 262; (Hewitson), ii. p. 493, pl. cxxxvii.; (Gould), B. of Gt. Brit. v. pl. 61; Dresser, viii. p. 447, pls. 607, 608; Seebohm, B. Jap. Emp. p. 294; Saunders, Cat. B. Br. Mus. xxv. p. 305; id. Manual, p. 683; Ridgway, p. 25; Lilford, vi. p. 63, pl. 29; *R. t. pollicaris,* Stejn., in Baird, B., and Ridgway, Water B. N. Am. ii. p. 402 (1884); Tacz. F. O. Sib. O. p. 1052; Ridgway, p. 25; *L. rissa,* Linn. Syst. Nat. i. p. 224 (1766); Gould, B. of E. v. pl. 435.

Mouette tridactyle, French; *Gaviota, Gabina,* Span.; *Gaivota,* Portug.; *Gabbiano-terragnola,* Ital.; *Dreizehen-Mewe,* German;

Drieteenige-Meeuw, Dutch; *Tretaaet Maage*, Dan.; *Krykje*, Norweg.; *Ringtjaen*, *Tretåig-Måse*, Swed.

♂ *ad.* (Greenland). Head, neck, upper tail-coverts, tail, and entire under parts pure white; mantle dark French-grey or slate-grey; quills black at the end, the inner primaries with an apical white tip, the first with the outer web black; secondaries and scapulars edged with white; hind toe absent or rudimentary; beak yellow, red at the gape; legs and feet blackish brown; iris brown; edges of eyelids red. Culmen 1·5, wing 11·2, tail 5·2, tarsus 1·25 inch. Sexes alike. In winter the nape and sides and back of neck are streaked with grey. The young bird has the upper parts variegated with black, a mark before the eye and a large patch on the ear-coverts blackish grey; a semi-collar on the hind neck, the first 4 quills and a broad tip to the tail black.

Hab. The Arctic and subarctic regions of the Old and New Worlds as far south as North-west France, the Kurile Islands in Asia, and the Gulf of St. Lawrence in N. America in summer; ranging in winter south to the Caspian, the Mediterranean, and Canaries, and on the American side to the middle United States and Bermuda.

Essentially a bird of the sea cliffs, it is only seen inland when driven by stress of weather, and feeds on small fish, crustaceans, and other maritime animals, which it usually fishes up from the surface of the water. Its flight is soft and easy, and it both swims well and can also dive. It breeds on the ledges of cliffs skirting the sea, often in companies of thousands, and constructs a rather bulky nest of seaweeds and grasses. The eggs, usually 3 in number, are deposited in May or June, and in ground-colour are ochreous grey, sometimes tinged with greenish, or pale greenish olivaceous, clouded and spotted with pale purplish grey and dark brown. In size they measure about 2·9 by 1·53.

1132. RED-LEGGED KITTIWAKE.

RISSA BREVIROSTRIS.

Rissa brevirostris (Bruch), J. f. O. 1853, p. 103; Saunders, Cat. B. Br. Mus. xxv. p. 312; Tacz. F. O. Sib. O. p. 1053; Ridgway, p. 25; *L. brachyrhynchus* (nec. Richardson), Gould, P.Z.S. 1843, p. 106; *Rissa nivea* (nec. Pallas), Gray, List. B. B. Mus. Anseres, p. 174 (1844); D. G. Elliot, New and Unfig. B. N. Am. ii. pl. 54.

♂ *ad.* Differs from *R. tridactyla* in having the mantle darker, the outer webs and margins of inner webs of the primaries up to the 4th darker, the under wing-coverts greyish slate, but paler than the mantle; bill lemon-yellow with a tinge of green; legs and feet bright red; iris brown.

Culmen 1·25, wing 12·5, tail 5·6, tarsus 1·25, middle toe with claw 1·95 inch; hind toe very small, sometimes with and sometimes without a claw. The young bird differs from that of *R. tridactyla* in lacking the black band on the wing and on the tail.

Hab. The Bering Sea from the Kamchatkan coasts to the Aleutian and Prybiloff Islands.

In habits it resembles the Kittiwake, and like it breeds on the ledges of almost inaccessible cliffs by the sea, its eggs being also similar in appearance, and measuring about 2·36 by 1·64.

LARUS, Linn., 1766.

1133. Black-headed Gull.

LARUS RIDIBUNDUS.

Larus ridibundus, Linn. Syst. Nat. i. p. 225 (1766); Naum. x. p. 264, Taf. 260; Hewitson, ii. p. 491, pl. cxxxvi. figs. 2, 3; (Gould), B. of E. v. pl. 425; (id.), B. of Gt. Brit. v. pl. 64; Dresser, viii. p. 357, pls. 596, 597, fig. 1; David and Oust. Ois. Chine, p. 520; Seebohm, B. Jap. Emp. p. 295; Saunders, Cat. B. Br. Mus. xxv. 207; id. Manual, p. 665; Blanf. F. Brit. Ind. Birds, iv. p. 300; (Tacz.), F. O. Sib. O. p. 1040; Lilford, vi. p. 39, pl. 19; *L. capistratus*, Temm. Man. d'Orn. ii. p. 785 (1820).

Goéland rieur, French; *Gaivota, Chapalhéta,* Portug.; *Gavina, Gaviota,* Span.; *Gabbiano comune,* Ital.; *Lachmewe, Mohrenkopf,* German; *Kokmeeuw,* Dutch; *Hættemaage,* Dan. and Norweg.; *Skrattmåse,* Swed.; *Naurulokki,* Finn.; *Tschaika,* Russ.; *Yurikamome,* Jap.

♂ *ad.* (S. Russia). Hood brownish black or coffee-brown; mantle pale French-grey; a narrow space round the eye, tail-coverts, tail, and entire under parts white, the last faintly tinged rose-colour; primaries white, with the tips and margins of the inner webs black; secondaries French-grey, the outer ones tipped with blackish; bill, edges of eyelids, legs, and feet lake-red; iris deep brown. Culmen 1·8, wing 12·0, tail, 5·0, tarsus 1·8. In winter the hood is absent, there being a little grey before the eye and on the occiput, and a blackish grey patch behind the eye.

Hab. Europe, north to the Færoes, the Baltic Islands and Archangel, south to the Mediterranean; wintering in Africa, south to Nubia; Asia east to Japan, north to Kamchatka; wintering in India, China, and the Philippines.

In habits it differs from many of its allies in selecting inland marshes for the purpose of nidification. Its flight is easy and graceful, and it swims with ease, sitting very lightly on the water. Its note resembles the syllables *kree, kree,* or *kech, kech,* and when uttered by many, resembles harsh laughter. Its food consists of small fish, insects, larvæ, and worms. It breeds on inland marshes, and islands in lakes, usually in large societies, constructing its nest of reeds and dried grass, and in May, or sometimes late in April, deposits 3 eggs, which in ground-colour vary from pale bluish white to dark olivaceous brown, more or less spotted and blotched with deep umber and blackish brown, and measure about 2·2 by 1·47.

1134. BROWN-HEADED GULL.

LARUS BRUNNEICEPHALUS.

Larus brunneicephalus, Jerdon, Madr. Journ. xii. p. 25 (1840) ; (David and Oust.), Ois. Chine, p. 521 ; Saunders, Cat. B. Br. Mus. xxv. p. 215 ; Blanf. F. Brit. Ind. Birds, iv. p. 301.

Dhomra, Hindu.

♂ *ad.* (N.W. India). Differs from *L. ridibundus* in being larger, the hood browner, especially paler on the forehead, and the pattern of the quills (which are blacker) different ; the two outer quills black with elongated white subterminal spots, and a little white at the base, the 3rd with more white at base, with the white increasing on the inner ones ; bill red, brownish at the tip ; legs and feet red ; iris white or pale yellow ; sides red. Culmen 1·9, wing 13·5, tail 5·2, tarsus 2·0 inch. In winter and immature dress it differs from *L. ridibundus* in the different pattern of the quills.

Hab. Central Asia from Turkestan to Tibet and Mongolia; wintering on the coasts and marshes of Burma, India, and Ceylon, and as far west as Aden.

In general habits this Gull resembles *L. ridibundus.* It breeds on the high tablelands of Tibet in Central Asia, but its nest and eggs appear to be undescribed.

1135. ADRIATIC GULL.

LARUS MELANOCEPHALUS.

Larus melanocephalus, Natterer, Isis, 1818, p. 816; Naum. x. p. 254, Taf. 259 ; (Gould), B. of E. v. pl. 427 ; Dresser, viii. p. 365, pl. 597, fig. 2 ; Saunders, Cat. B. Br. Mus. xxv. p. 180 ; id. Manual, p. 667 ; Lilford, vi. p. 43, pl. 20.

Goéland mélanocéphale, French ; *Gabbiano corallino*, Ital.

♂ *ad.* (Bosphorus). Differs from *L. ridibundus* in having the hood jet black; a small crescentic white patch above and one below the eye; the bill rather stouter and larger; quills white, the first only externally margined with black; bill and legs red; iris brown. Culmen 1·6, wing 12·0, tail 5·0, tarsus 1·9 inch. In winter it differs from *L. ridibundus* in the coloration of the primaries, and the nape and hind neck are much more striated, not clouded, with grey.

Hab. The coasts of the Black Sea and Mediterranean, Spain, Portugal, and South France, straying north as far as England, where it has been obtained once or twice, and the mouth of the Somme, in Northern France. Winters as far south as Nubia.

In habits it resembles *L. ridibundus*, but its cry, though very similar, may be distinguished by a practised ear. It breeds in the eastern portion of its range, on sand-banks and in lagoons, its nest being constructed of seaweed and grass, and in May, or early in June, 2 to 3 eggs are laid, which vary in ground-colour from white to pale stone-ochreous, with pale inky shell-markings and blackish brown surface spots, blotches, and scratches. In size they measure about 2·28 by 1·55.

1136. BONAPARTE'S GULL.

LARUS PHILADELPHIA.

Larus philadelphia (Ord), in Guthrie's Geogr. 2nd Amer. ed. ii. p. 319 (1815); (Gould), B. of Gt. Brit. v. pl. 65; (Newton), P.Z.S. 1871, p. 57, pl. iv. fig. 6 (egg); Dresser, ix. p. 387, pl. 717; Saunders, Cat. B. Br. Mus. xxv. p. 185; id. Manual, p. 661; Ridgway, p. 36; Lilford, vi. p. 35, pl. 17; *L. bonapartii*, Swains. and Richards. Faun. Bor. Am. Birds, p. 425, pl. 72 (1831).

♂ *ad.* (Canada). Head and neck dark plumbeous black; a narrow, interrupted white line round the eye; mantle dark French-grey; lower neck, upper tail-coverts, tail, and entire under parts white; 1st primary white, but black on the outer web and across the tip, 2nd black across the tip and a little way up the edge of the inner web, the 3rd and 4th with broad subterminal black bands and white tips, pearl-grey on the inner webs, the rest up to the 7th grey with black subterminal bars, the 7th and 8th grey with a small dark margin at the end of the inner web; bill deep black; legs and feet orange-red; iris dark brown. Culmen 1·6, wing 10·3, tail 4·0, tarsus 1·38 inch. In winter the head and neck are white, slightly marked with grey, a grey spot on the ear-coverts, the legs flesh-coloured.

Hab. North America, breeding in the Fur countries and found in winter as far south as Bermuda; a rare straggler to Europe, having been obtained about six times in Britain, and once in Heligoland.

In habits it resembles *L. ridibundus*, but its flight is more Tern-like, it is very graceful on the wing, and frequently perches on posts and trees. It breeds in colonies, placing its nest, which is constructed of sticks, sometimes intermixed with moss and lichens, on trees and bushes, and in June, or early in July, deposits 3, rarely 4, eggs, which are pale olivaceous green or olivaceous brown with purplish grey shell-markings and blackish brown surface spots and blotches, and which measure about 1·95 by 1·35.

1137. GREAT BLACK-HEADED GULL.

LARUS ICHTHYAETUS.

Larus ichthyaetus, Pall. Reise Russ. Reichs, ii. p. 713 (1773); Dresser, viii. p. 369, pl. 598; Saunders, Cat. B. Br. Mus. xxv. p. 176; id. Manual, p. 669; Blanf. F. Brit. Ind. Birds, iv. p. 299; Lilford, vi. p. 48, pl. 21.

Rybak, Russ.; *Charabalta*, Tartar.

♂ *ad.* (Volga). Head and upper neck jet black; above and below the eye a white spot; mantle French-grey; lower neck, upper back, tail, and under parts white; primaries white, the first with the outer web, and a bar near the tip black, the rest with subterminal black bars; secondaries French-grey broadly tipped with white; beak yellow, crossed by a broad red patch, and near the tip a black bar; legs yellow, webs orange; iris dark brown. Culmen 3·4, wing 18·8, tail 7·5, tarsus 2·8 inch. In winter the head is white, more or less streaked with brownish black.

Hab. South-eastern Europe, but has been obtained in Greece, Hungary, Sardinia, Switzerland (?), and once in the south-west of England; North-east Africa in winter, south to Nubia; Palestine and Asia Minor; Asia, east to Eastern Turkestan, Mongolia, and Tibet; south to India, Burma, and Ceylon in winter.

Frequents the sea coasts, large rivers, lakes, &c., and like its allies feeds on small fish, insects, &c. I do not find any definite information respecting its breeding habits, but eggs from Sarepta, on the lower Volga, are dull stone-drab in ground-colour, streaked and blotched with light and dark umber-brown, and measure 2·95 by 2·8.

1138. SAUNDERS'S GULL.

LARUS SAUNDERSI.

Larus saundersi (Swinhoe), P.Z.S. 1871, pp. 273, 421, pl. xxii.; (David and Oust.), Ois. Chine, p. 522; (Tacz.), F. O. Sib. O. p. 1045: Saunders, Cat. B. Br. Mus. xxv. p. 183; *Gavia kittlitzii*, Swinhoe, Ibis, 1860, p. 68 (nec. Bruch); *L. schimperi*, Schlegel (nec. Bruch), Mus. Pays-Bas, Lari, p. 40 (1863).

♂ *ad.* (China). Differs from *L. ridibundus* in being smaller, in having the hood bluish black, the mantle rather darker, the inner secondaries chiefly grey, the rest white; 1st primary white, with a mere hair line of black on the basal half of the outer web, and a marginal black band on the inner web; the 2nd white exteriorly, black on the inner web to the subapex; 3rd similar but with more black, which extends subapically over the outer web; 4th grey basally, barred and margined with black, and broadly tipped with white; 5th the black restricted to the inner web; 6th and upwards grey, with paler tips and inner borders; bill short and stout, black; inside of mouth vermilion; legs tile-red, claws black; iris black; edge of eyelids black. Culmen 1·4, wing 11·0, tail 4·4, tarsus 1·6 inch. In winter the head is white with little dark grey on the occiput.

Hab. Eastern Siberia (Sidemi); Mongolia, China, Corea, and Japan in winter.

Resembles *L. ridibundus* in its general habits and food, and frequents inland waters and rivers as much if not more than the sea coasts. Nothing is as yet known respecting its nidification.

1139. LITTLE GULL.

LARUS MINUTUS.

Larus minutus, Pall. Reise Russ. Reichs, iii. p. 702 (1771); Naum. x. p. 242, Taf. 258; Hewitson, ii. p. 490, pl. cxxxiv. fig. 1; (Gould), B. of E. v. pl. 428; id. B. of Gt. Brit. v. pl. 66; Dresser, viii. p. 373, pls. 599, 599A; Saunders, Cat. B. Br. Mus. xxv. p. 173; id. Manual, p. 663; (Tacz.), F. O. Sib. O. p. 1043; Lilford, vi. p. 37, pl. 18; Ridgway, p. 36.

Mouette pygmée, French; *Gaviota*, Span.; *Gabbianello*, Ital.; *Zwergmöwe*, German; *Dwerg-meeuw*, Dutch; *Dværgmaage*, Dan.; *Dvärgmås*, Swed.; *Pikku-lokki*, Finn.; *Tschaika-malaya*, Russ.

♂ *ad.* (Ladoga). Hood deep black; lower neck, rump, upper tail-coverts, tail, and under parts white, the last tinged with rose-pink; mantle delicate French-grey; quills grey broadly edged with white, the margins of the inner webs smoke-grey; under wing-coverts dark smoke-grey; bill blackish lake-red; legs and feet vermilion-red; iris dark brown. Culmen 0·9, wing 8·8, tail 3·6, tarsus 0·95 inch. In winter the head is white, the crown and nape tinged with grey, the legs and feet yellowish red.

Hab. North-eastern Europe; rare in Norway and Sweden; Finland to Uleåborg; Russia to Archangel; has once been obtained in the Færoes; of irregular occurrence in Britain; in winter it ranges south to the Mediterranean and North Africa; North Asia, east to the Sea of Ochotsk, but rare in South-east Siberia;

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and has not been recorded from Mongolia or China; has once been obtained in India; an accidental straggler to Bermuda and the eastern United States (Long Island).

Frequents inland waters and marshes, feeding on small fish and insects. Its flight is graceful and easy, and its note is a laughing *kerr, arrr, arrr arr,* which it utters when disturbed. It breeds in large companies, in marshy localities inland, constructing a rather loosely formed nest of flag-leaves, grass, straws, &c., which is placed on almost floating islands, and late in May or early in June lays 3 to 4 eggs, which are not unlike some varieties of the Arctic Tern, greenish olive in ground-colour with blackish grey shell-markings and dark brown surface spots and blotches, in size measuring about 1·66 by 1·19.

I have not described the young of these Black-headed Gulls, as they all resemble the adult bird in winter dress, but have the upper parts brown or marked with brown. The sexes are alike.

1140. COMMON GULL.

LARUS CANUS.

Larus canus, Linn. Syst. Nat. i. p. 224 (1766); Naum. x. p. 301, Taf. 261; Hewitson, ii. p. 495, pl. cxxxviii.; Gould, B. of E. v. pl. 437; id. B. of Gt. Brit. v. pl. 60; Dresser, viii. p. 381, pl. 600; David and Oust. Ois. Chine, p. 517; Seebohm, B. Jap. Emp. p. 293; Saunders, Cat. B. Br. Mus. xxv. p. 277; id. Manual, p. 671; Tacz. F. O. Sib. O. p. 1033; Ridgway, p. 33; Lilford, vi. p. 49, pl. 22; *L. niveus,* Pall. (nec. Bodd.), Zoog. Ross. As. ii. p. 320, Tab. 64 (1811); Tacz. F. O. Sib. O. p. 1034.

Goëland cendré, French; *Gavinote,* Span.; *Gavina,* Ital.; *Sturmmöwe,* German; *Kleine Zeemeeuw,* Dutch; *Stormaage,* Dan.; *Fiskemaage,* Norweg.; *Fiskmåse,* Swed.; *Kalalokki,* Finn.; *Sisaja-Tschaika, Klusha,* Russ.

♂ *ad.* (Sweden). Head, neck, tail-coverts, tail, and entire under parts pure white; mantle delicate light French-grey; 1st primary black, with a broad white bar close to the tip, the 2nd with a smaller bar, the 3rd with merely a white spot near the tip; inner primaries French-grey with black bars and white tips; secondaries with broad white tips; bill greenish yellow; legs greenish grey; iris golden brown, in very old birds greyish white; orbital ring vermilion. Culmen 1·8, wing 14·0, tail 5·5, tarsus 1·85 inch. In winter the head and nape are streaked with dull brown.

Hab. Europe generally, north to about 53° N. lat. and of rare occurrence in Iceland; wintering in the Mediterranean and the Nile valley; Eastern Asia, north to Kamchatka; Japan, Corea, and China; wintering in the Persian Gulf; has once occurred in Labrador.

In general habits it resembles its allies, and is not found only on the sea but tolerably far inland, where it feeds on the worms turned up by the plough, its food consisting of small fish, sand-eels, mollusca, and small crustacea, worms, and insects. Its flight is light and buoyant, and its cry is shrill and somewhat harsh. It breeds both on the coast and on inland lakes, making a nest of seaweed, grass, &c., and in May deposits 2 or 3, usually 3, eggs, which are brownish olive, marked with dull purplish brown shell blotches and dark brown surface spots and blotches, in size measuring about 2·29 by 1·63.

In North America the present species is replaced by a slightly smaller species, *L. brachyrhynchus*, Richardson, which has once been obtained in the Kurile Islands.

1141. SLENDER-BILLED GULL.

LARUS GELASTES.

Larus gelastes, Thienem. Fortpflanz. Vög. Eur. pt. v. p. 22, No. 351 (1838); Dresser, viii. p. 389, pl. 601, fig. 2; Saunders, Cat. B. Br. Mus. xxv. p. 230; Blanf. F. Brit. Ind. Birds, iv. p. 303; *L. tenuirostris*, Temm. Man. d'Orn. iv. p. 478 (1840); *L. columbinus*, Golowatschow, Bull. Soc. Mosc. xxvii. p. 435, Tab. iv. (1854).

Gabbiano roseo, Ital.

♂ *ad.* (Spain). Head, neck, tail, and entire under parts white, the under parts suffused with delicate rose-pink; 1st primary with the outer web black except near the tip, and tipped with black; 2nd, 3rd, and 4th with the outer web white, the inner brownish French-grey, becoming dark brown on the edge, all the quills broadly black at the tip; mantle pearl-grey; wing-coverts rather darker; secondaries without white margins; bill red; legs, feet, and edges of eyelids coral-red; iris pale straw-yellow, nearly white. Culmen 2·1, wing 12·0, tail 4·5, tarsus 2·1 inch. Sexes alike, and in winter scarcely differing, but the bill is orange-yellow and the legs lemon-yellow.

Hab. The coasts of the Mediterranean; East Africa to Keneh in Upper Egypt and Jeddah on the Red Sea; West Africa south to Senegal; Asia Minor, the Black Sea and the Caspian, east to

Mesopotamia, the Persian Gulf, and Makran coasts of Baluchistan and Sind.

Is essentially a sea bird, being seldom found inland except some short way up the larger rivers. It feeds on small fish and insects of various kinds. For breeding purposes it selects a sand-bank or the dry portions of a marsh or an island in a lagoon, where it nests in colonies. I found it nesting in May in the marismas of the Guadalquivir, on the dried mud of an island in the lagoon, constructing a somewhat loosely built nest of sticks and a few Flamingoes' feathers, the number of eggs being 3, sometimes only 2. These were white in ground-colour, with a faint rosy blush when fresh, with pale inky grey shell-markings and black or blackish brown surface spots and blotches, some being only sparingly marked, whereas others are very boldly and profusely blotched, chiefly at the larger end. In size they measure about 2·95 by 1·53.

1142. Audouin's Gull.

LARUS AUDOUINI.

Larus audouini, Payraudeau, Ann. Sc. Nat. viii. p. 462 (1826) ; Gould, B. of E. v. pl. 438 ; Dresser, viii. p. 395, pl. 601, fig. 1 ; Saunders, Cat. B. Br. Mus. xxv. p. 271.

Gabbiano côrso, Ital.

♂ *ad.* (Toro). Head, tail, and entire under parts white ; mantle and rump pearl-grey, the lower hind neck rather paler ; first two primaries black, with a large white spot near the tip of the inner web, the rest pearl-grey, black towards the tip, and tipped with white ; under parts with a faint rose tinge in the freshly killed bird ; bill coral-red with a black band in front of the angle, the tip yellow ; legs olive-green ; iris hazel ; edge of the eyelids coral-red. Culmen 2·35, wing 15·7, tail 6·5, tarsus 2·4 inch. Sexes alike.

Hab. The western Mediterranean islands, rarer on the coasts of the mainland, occurring as far west as the Straits of Gibraltar, and sometimes as far east as the Greek Archipelago.

In habits it appears to resemble the Herring-Gull, and is essentially a sea bird, breeding on the rocks of the small islands in colonies apart from its congeners, and depositing 1 or 2 eggs, which are stone-buff with a slight olivaceous tinge, with inky grey shell-markings and blackish surface spots and blotches, and measure about 2·5 by 1·73.

1143. Black-tailed Gull.

LARUS CRASSIROSTRIS.

Larus crassirostris, Vieill. Nouv. Dict. xxi. p. 508 (1818); David and Oust. Ois. Chine, p. 519; Seebohm, B. Jap. Emp. p. 293; Tacz. F. O. Sib. O. p. 1037; Saunders, Cat. B. Br. Mus. xxv. p. 227; *L. melanurus*, Temm. Pl. Col. livr. 77, pl. 459 (1828); id. and Schlegel, Faun. Jap. Aves, p. 132, Tab. 88.

Umineko, Jap.

♂ *ad.* (Japan). Head, neck, under parts and upper tail-coverts white; mantle slate-grey; tail white, the base pale grey, all except the outermost feather on each side crossed by a broad subterminal black band; the five outer primaries blackish with white tips, increasing in size inwards; scapulars and secondaries edged with white; under wing-coverts white; bill greenish yellow, becoming orange at the tip, and crossed by a black band; legs and feet fleshy brownish; iris pale straw-yellow, the edge of the eyelids vermilion. Culmen 2·5, wing 15·5, tail 6·0, tarsus 2·3 inch. In winter similar, but with a little greyish brown on the head and nape.

Hab. The Ussuri country, Eastern Siberia, the coasts of the Sea of Japan, and Japan, the Island of Saghalien, and China south to about 22° N. lat.

Is easily recognizable from *L. canus* (which it somewhat resembles) by the broad black band on the tail; it frequents the sea coast, large rivers and lakes, and is one of the commonest species in Japan and North China. I find but little on record respecting its nidification, excepting that it nests on rocks, depositing from the middle of May to the early part of June 3 eggs, which vary in ground-colour from ochreous grey to pale olivaceous, and are spotted, blotched, and scratched with blackish brown or yellowish brown, in size measuring about 2·50 by 1·75.

1144. Herring-Gull.

LARUS ARGENTATUS.

Larus argentatus, Gmel. Syst. Nat. i. p. 600 (1788); Naum. x. p. 379, Taf. 266; Hewitson, ii. p. 499, pl. cxl.; Gould, B. of E. v. pl. 434; id. B. of Gt. Brit. v. pl. 59; Dresser, viii. p. 399, pl. 602, fig. 1; Saunders, Cat. B. Br. Mus. xxv. p. 260; id. Manual, p. 673; Ridgway, p. 30; Lilford, vi. p. 51, pl. 23; *L. smithsonianus*, Coues Proc. Philad. Ac. 1862, p. 296; Ridgway, p. 31.

Goéland argenté, French; *Gaivota, Alcatraz*, Portug.; *Gaviota, Gavinot*, Span.; *Silbermöwe*, German; *Zilvermeeuw*, Dutch;

Graa-Havmaage, Dan.; *Säing*, *Stor-Graamaage*, Norweg.; *Gråtrut*, Swed.; *Harmaa-lokki*, Finn.; *Tschaika-serebristarga*, Russ.

♂ *ad.* (Orkneys). Head, neck, rump, tail, and entire under parts white; mantle delicate light French-grey, the larger wing-coverts, secondaries, and scapulars broadly tipped with white; first primary blackish, towards the tip white with a subapical black band, the next two grey at the base, then black with a large white spot at the tip, the rest grey, subapically black, and tipped with white; beak pale yellow with a large red spot at the angle of the lower mandible; legs and feet flesh-colour; iris yellowish grey, the edge of the eyelids yellow. Culmen 2·65, wing 16·7, tail 6·75, tarsus 2·5. In winter similar, but the head and neck are striated with pale brown.

Hab. Northern Europe to the North Cape, east to the White Sea; rare in Greenland; in winter south to the Mediterranean basin, Black and Caspian Seas; America, from the high north to Maine, passing south in winter to the Bermudas, Cuba, Mexico, and Southern California.

In the winter season it frequents the coasts, inlets, and estuaries, where it finds small fish, especially herring fry, plentiful, for its food consists of small fish, fish fry, mollusca, crustaceans, clams, mussels, &c.; the last it takes up in the air to some height and drops on the stones to break the shell, and it also visits ploughed land in search of worms and insects. It is also a great egg robber. It nests on cliffs, small islands, and in America even on trees, sometimes building a bulky nest of grass straws and dry herbage, at others the nest is a mere depression in the ground with scarcely any lining. In May, 3 eggs are deposited, which in ground-colour vary from brownish grey to dull olive-brown with violet-grey shell blotches and dark brown surface spots and blotches, in size measuring about 2·8 by 1·9.

1145. SUBSP. LARUS CACHINNANS.

Larus cachinnans, Pall. Zoogr. Ross. As. ii. p. 318; Saunders, Cat. B. Br. Mus. xxv. p. 266; id. Manual, p. 674; Tacz. F. O. Sib. O. p. 1030; *L. leucophæus*, Licht. Nomencl. Av. p. 99 (1854); Dresser, viii. p. 411, pl. 602, fig. 2; *L. michahellesii*, Bruch, J. f. O. 1855, p. 282.

Gabbiano reale, Ital.; *Chochotunja*, Russ.

♂ *ad.* (Algiers). Differs from *L. argentatus* in having the mantle darker, the ring round the eye and gape orange-red, the bill brighter coloured, and the legs and feet gamboge-yellow. Culmen 3·1, wing 18·5, tail 7·7, tarsus 2·85 inch.

Hab. Southern Europe, in the west north to the Gulf of Gascony, in the east to the Dvina; the entire Mediterranean basin; Africa, in the west south to Angola, in the east to Khartoum; Madeira, the Canaries, and Azores: the Black Sea, Caspian, and Aral, eastward to Dauria; wintering in Northern India and on the coasts of Baluchistan and Sind; has once occurred in England.

In habits this Gull does not differ from *L. argentatus*, and its note is a similar *hă-hă-hă*. Nor does it differ in nidification, and its eggs are similar.

1146. SUBSP. LARUS VEGÆ.

Larus vegæ, Stejn. Auk, 1888, p. 310; Saunders, Cat. B. Br. Mus. xxv. p. 269; Tacz. F. O. Sib. O. p. 1028; Ridgway, p. 30; *L. occidentalis* (nec. Aud.), Swinhoe, P.Z.S. 1863, p. 326; David and Oust. Ois. Chine, p. 520; *L. cachinnans* (nec. Pall.), David and Oust. op. cit. p. 519; Seebohm, B. Jap. Emp. p. 291.

♂ *ad.* (E. Siberia). Differs from *L. cachinnans* in having the mantle darker and bluer, while the legs and feet are pale flesh-colour. Culmen 2·9, wing 17·9, tail 7·55, tarsus 2·69 inch.

Hab. The Arctic coasts of Siberia from the Taimyr Peninsula to Bering Straits and Kamchatka; Japan and the coasts of China south to the Bonin Islands and Formosa in winter, as also the North-western American coasts down to California.

In habits this Gull does not differ from *L. argentatus*, and its eggs are described as being similar and measuring about 2·91 by 1·85.

1147. LESSER BLACK-BACKED GULL.

LARUS FUSCUS.

Larus fuscus, Linn. Syst. Nat. i. p. 225 (1766); Naum. x. p. 419, Taf. 267; Gould, B. of E. v. pl. 431; id. B. of Gt. Brit. v. pl. 56; Dresser, viii. p. 421, pl. 603; Saunders, Cat. B. Br. Mus. xxv. p. 250; id. Manual, p. 675; Ridgway, p. 28; Lilford, vi. p. 55, pl. 24.

Goéland à pieds jaunes, French; *Alcatraz*, Portug.; *Zafferano*, Ital.; *Heringsmöwe*, German; *Kleine Mantelmeeuw*, Dutch; *Sildemaage*, Dan. and Norweg.; *Sillmåse*, Swed.; *Selkälokki*, Finn.; *Syeldieloff*, Russ.

♂ *ad.* (Sweden). Head, neck, tail, and under parts white; back and wings black, the former faintly washed with slate; first primary with a white bar near the tip, the rest narrowly, the secondaries broadly tipped with white; bill light yellow, the lower mandible with a bright red patch towards the tip; iris straw-yellow; edge of eyelids vermilion; legs and feet yellow. Culmen 2·4, wing 15·7, tail 6·0, tarsus 2·1 inch.

Hab. Northern Europe, as far north in Sweden as Haparanda, and in Norway as the Russian frontier, east to the Dvina, west to the Færoes and Great Britain, south to the Mediterranean; wintering in the Canaries, Madeira, Africa south to Senegambia and Nubia; rare in the North Caspian; the Persian Gulf in winter.

In habits it does not differ from its allies. It is chiefly found on the sea coasts, and feeds on small fish, crustacea, land and marine mollusca, worms, &c. Its cry is loud, mellow, and plaintive, and it also utters a cackling or laughing cry. It breeds on cliffs, in some parts on islands in lakes, and in marshes, constructing a rather bulky nest of grass, moss, &c., and early in May deposits 2 to 3, usually 3, eggs, which in ground-colour vary from light greenish blue to pale olivaceous brown, and are spotted and blotched with violet-grey underlying shell-markings and dark brown surface blotches. In size they measure about 2·75 by 1·96.

1148. SIBERIAN GULL.

LARUS AFFINIS.

Larus affinis, Reinhardt, Vidensk. Meddel. 1853, p. 78; Dresser, viii. p. 417; Ridgway, p. 29; Saunders, Cat. B. Br. Mus. xxv. p. 254; Tacz. F. O. Sib. O. p. 1026; Blanf. F. Brit. Ind. Birds, iv. p. 304.

♂ *ad.* (Petchora). Differs from *L. fuscus* in being larger, with a proportionately shorter wing, the mantle paler, being dark dull slate-blue; quills black, with a distinct dark slate pattern on the inner web, the first with a white spot near the tip, several others slightly tipped with white, the inner secondaries broadly white tipped; bill and legs as in *L. fuscus*; orbital ring deep orange. Culmen 2·75, wing 17·4, tail 7·0, tarsus 2·8 inch.

Hab. Northern Europe and Asia from the Dvina to the Yenesei; wintering on the coasts of Baluchistan, Western India, Malabar, Southern Arabia, Somaliland, Aden, and Socotra; has once been obtained in Heligoland, and the type in South Greenland.

In habits it resembles *L. fuscus*, and its eggs are like those of that species.

1149. SLATY-BACKED GULL.

LARUS SCHISTISAGUS.

Larus schistisagus, Stejneger, Auk, 1884, p. 231; Tacz. F. O. Sib. O. p. 1024; Saunders, Cat. B. Br. Mus. xxv. p. 258; Ridgway, p. 29; *L. marinus* (nec. Linn.), Swinhoe, Ibis, 1874, p. 165; Seebohm, B. Jap. Emp. p. 291.

Ō-seguro-kamome, Jap.

♂ *ad.* (Kuriles). Head, neck, tail, and under parts white; wings and mantle dark slate; scapulars and secondaries tipped with white; quills black, the inner webs of the outer ones grey; third quill with a distinct white spot between the grey and the black on the inner web; bill rich yellow with a red subterminal spot on the lower mandible; legs and feet dull purplish flesh-colour. Culmen 2·28, wing 18·0, tail 7·6, tarsus 2·7 inch.

Hab. Coasts of Eastern Siberia, the Bering and Okhotsk Seas; the Kurile Islands, and Northern Japan in winter.

In habits it does not differ from its allies. It breeds in the Kurile Islands, but its eggs appear to be undescribed.

1150. GREATER BLACK-BACKED GULL.

LARUS MARINUS.

Larus marinus, Linn. Syst. Nat. i. p. 225 (1766); Naum. x. p. 438, Taf. 268, 269; Hewitson, ii. p. 501, pl. cxli. fig. 1; Gould, B. of E. v. pl. 430; id. B. of Gt. Brit. v. pl. 55; Audub. B. Am. pl. 241; Dresser, viii. p. 427, pl. 604; Saunders, Cat. B. Br. Mus. xxv. p. 241; id. Manual, p. 677; Ridgway, p. 28; Lilford, vi. p. 57, pl. 25.

Goéland à manteau noir, French; *Gaivota, Alcatraz*, Portug.; *Gavinòt*, Span.; *Mugnaiaccio*, Ital.; *Mantel-möwe*, German; *Mantelmeeuw*, Dutch; *Veidi-bjalla, Svart-bakur*, Icel.; *Svartbag-maage*, Dan.; *Hafmaage*, Norweg.; *Hafstrut*, Swed.; *Merilokki*, Finn.

♂ *ad.* (Sweden). Head, neck, tail, and entire under parts white; mantle black with a slaty tinge; primaries black washed with slate on the inner web, the first and second with a broad white tip, the second with a black band across the white, the third with a narrow white tip, the inner ones with the terminal portion slate-grey, with a black subterminal band and white tip; secondaries and scapulars tipped with white; bill light yellow with a red patch towards the end of lower mandible; legs and feet greyish white with a fleshy tinge; iris hazel; edge of eyelids vermilion. Culmen 3·5, wing 20·0, tail 9·0, tarsus 3·0 inch.

Hab. Northern Europe, east to the Petchora river, north in Norway to the Russian frontier, and in Sweden to about Sundsvall; the Færoes and Iceland; rarer in Greenland; fairly common in the northern part of Britain; in winter migrating south to the Canaries and Mediterranean, where it is rare, east to Egypt, and the Volga; the Atlantic coasts of North America, south to Virginia and Florida.

It feeds on fish and offal, and being extremely predatory in its habits it destroys large numbers of the eggs and young of water birds, and will kill and devour wounded birds. Its note is a loud clear cry, *yow, yow, yow,* and it often utters a hoarse cackle when on the wing. It nests not only on the sea coast but also about inland waters, making a large nest of dry grass, heather, wool, moss, and sometimes feathers, which it places on a rock or on the ground, and in May deposits 2 to 3 eggs, which are lighter or darker olive-brown, with dark or brown blotches, and in size measure about 3·0 by 2·13.

1151. GLAUCOUS GULL.

LARUS GLAUCUS.

Larus glaucus, Fabricius, Faun. Groenl. p. 100 (1780); Naum. x. p. 350, Taf. 264; Hewitson, ii. p. 504, pl. cxli. fig. 2; Gould, B. of E. v. pl. 432; id. B. of Gt. Brit. v. pl. 57; Dresser, viii. p. 433, pl. 605; Seebohm, B. Jap. Emp. p. 290; Saunders, Cat. B. Br. Mus. xxv. p. 289; id. Manual, p. 679; Ridgway, p. 26; Lilford, vi. p. 59, pl. 26; *L. barrovianus*, Ridgway, Auk, 1886, p. 330; Tacz. F. O. Sib. O. p. 1019.

Eismöwe, German; *Burgemeester*, Dutch; *Hvítmáfr*, Icel.; *Graamaage,* Dan.; *Stor Hvidvinget-maage,* Norweg.; *Hvittrut,* Swed.; *Iso-lokki, Pormestari,* Finn.; *Morskaia-Tschaika,* Russ.

♂ *ad.* (Greenland). Mantle very pale blue-grey, rest of plumage pure white; bill yellow with a red patch towards the tip of the lower mandible; legs light flesh-colour; iris light yellow, the edge of the eyelid vermilion. Culmen 3·1, wing 18·6, tail 8·5, tarsus 2·8 inch.

Hab. The Arctic regions of the Old and New Worlds; in winter passing south to the coasts of Europe as far south as the Mediterranean (rarely), the Black Sea, and North Caspian; in Asia to Japan; in America to Long Island and the Great Lakes.

In habits it resembles *L. marinus,* and like that bird builds a bulky nest of dry grass, seaweeds, &c., or utilizes a depression in the ground, lining it scantily with grass. Its 3 eggs resemble those of *L. marinus,* but are subject to rather more variation both in ground-colour and markings.

1152. ICELAND GULL.

LARUS LEUCOPTERUS.

Larus leucopterus, Faber, Prodrom. Isl. Orn. p. 91 (1822); Naum. x. p. 367, Taf. 265; Hewitson, ii. p. 498, pl. cxxxix. figs. 1, 2; Dresser, viii. p. 439, pl. 606; Saunders, Cat. B. Br. Mus. xxv. p. 295; id. Manual, p. 681; Tacz. F. O. Sib. O. p. 1023; Ridgway, p. 26; Lilford, vi. p. 62, pl. 28; *L. islandicus,* Edmonst. Mem. Wern. Soc. iv. p. 506 (1823); Gould, B. of E. v. pl. 433; id. B. of Gt. Brit. v. pl. 58.

Goeland leucoptère, French; *Polarmöwe,* German; *Kleine Burgemeester,* Dutch; *Hvítmáfr,* Icel.; *Hvidvinget-Maage,* Dan. and Norweg.; *Hvitvingad Trut,* Swed.

♂ *ad.* (Greenland). Differs from *L. glaucus* in being smaller, with a proportionately longer wing. Culmen 2·5, height of bill at base 0·65, wing 16·8, tail 7·6, tarsus 2·5 inch.

Hab. Jan Mayen Island and Greenland in summer; in winter to Iceland, the Færoes, Great Britain, Scandinavia (rarely), once in Finland, and as far south as the Gulf of Gascony in severe winters; Atlantic coasts of North America, south, in winter, to Massachusetts and the Great Lakes.

In habits it does not differ from *L. glaucus.* It breeds in Greenland, its nest being a mere depression in the ground, slightly lined with a few grass-bents, and it deposits 2 to 3 eggs, which resemble those of *L. glaucus,* but are smaller, measuring about 2·78 by 1·87.

1153. GLAUCOUS-WINGED GULL.

LARUS GLAUCESCENS.

Larus glaucescens, Naum. Vög. Deutschl. x. p. 351 (1840); Seebohm, B. Jap. Emp. p. 290; Saunders, Cat. B. Br. Mus. xxv. p. 284; Tacz. F. O. Sib. O. p. 1019; Ridgway, p. 27.

♂ *ad.* (Alaska). Differs from *L. glaucus* in wing pattern, and in having the mantle blue-grey; scapulars, secondaries, and primaries broadly tipped with white, the colour of the quills being two shades of ashy grey; 1st quill broadly terminated with white, the 2nd with a white sub-terminal spot on each web, the 3rd whitish at the apex of the wedge of the grey inner web, the 4th pale grey on the greater part of both webs, the darker colour being as a distinct bar, the 5th with a smaller dark bar surmounted by white, the 6th similar, but the bar reduced to a spot on the outer web, the rest grey at the base and tipped with white; bill yellow, red at the angle of the lower mandible; legs and feet light flesh-colour; iris clear grey. Culmen 2·7, wing 17·0, tail 7·9, tarsus 2·6 inch.

Hab. The coasts of the North Pacific and Bering's Sea; Kamchatka; the Aleutian and Commander Islands; in winter south to Japan and California.

In habits it resembles *L. glaucus.* It breeds abundantly on Bering and Copper Islands, frequently on isolated rocks and small islands, or on the ledges of rugged cliffs overhanging the sea, the nest being a depression, lined with dry grass, and early in July, 2 to 3 eggs are deposited, which resemble those of *L. glaucus*, but are somewhat smaller, greener, and more boldly spotted.

STERCORARIUS, Briss., 1760.

1154. GREAT SKUA.

STERCORARIUS CATARRHACTES.

Stercorarius catarrhactes (Linn.), Syst. Nat. i. p. 226 (1766); (Naum.), x. p. 470, Taf. 270; (Hewitson), ii. p. 505, pl. xlii.; (Gould), B. of E. v. pl. 439; (id.), B. of Gt. Brit. v. pl. 78; Dresser, viii. p. 457, pl. 609; (Saunders), Cat. B. Br. Mus. xxv. p. 315; (id.), Manual, p. 687; (Lilford), vi. p. 69, pl. 31; *Cataracta skua*, Retz. Faun. Suec. p. 161 (1800); Ridgway, p. 21.

Labbe cataracte, French; *Grosse Raubmöwe*, German; *Groote Jager*, Dutch; *Havskúmur*, *Hakallaskumur*, Icel.; *Stor-Kjove*, Dan.; *Skua*, *Storjo*, Norweg.; *Storlabb*, Swed.

♂ *ad.* (Færoes). General coloration dark brown marked with yellowish red; crown, rump, and upper tail-coverts almost uniform dark brown, the feathers on the rest of the upper parts with rufous or rusty yellowish tips; basal half of primaries white forming an alar patch; tail blackish brown, marked with white at the extreme base; throat feathers with yellowish shaft markings; abdomen tinged, and flanks slightly marked with rufous; bill black, paler at the base; legs and feet blackish; iris dark brown. Culmen 2·4, wing 15·6, tail 7·0, tarsus 2·7 inch. Sexes alike. The young bird is more distinctly marked with yellowish, and has more white on the wings and tail.

Hab. Iceland, the Færoes, and Shetlands in summer; rarer in South Greenland; scarce in Scandinavia; in winter south to the Straits of Gibraltar; a rare straggler to Germany, Switzerland, N. Italy, and the Mediterranean.

Essentially predatory in its habits the Skua seldom takes the trouble to fish for itself, but despoils the Gulls of their prey, and also takes numbers of young sea birds and eggs; it also feeds on carrion when obtainable. Its cry is a somewhat harsh *skui, skui,* and when disturbed and flying over its nesting place it utters a cry not unlike the cackling of a Goose. Its nest is a depression in the mossy ground on islands and high moorlands, scantily lined with dry grass and moss, and though not actually breeding in societies, several pairs are frequently found near together. Two eggs are deposited late in May, which are dull greenish olive-brown, some greener and others browner in tinge, marked with dark brown, and measure about 2·87 by 1·86.

1155. POMATORHINE SKUA.

STERCORARIUS POMATORHINUS.

Stercorarius pomatorhinus (Temm.), Man. d'Orn. p. 514 (1815); (Naum.). x. p. 487, Taf. 271; (Middend.), Sib. Reise, Zool. p. 240, Taf. 24, fig. 1 (egg); (Gould), B. of E. v. pl. 440; id. B. of Gt. Brit. v. pl. 79; Newton, P.Z.S. 1861, pl. xxxix. fig. 3 (egg); Dresser, viii. p. 463, pl. 610; Blanf. F. Brit. Ind. Birds, iv. p. 330; Saunders, Cat. B. Br. Mus. xxv. p. 322; id. Manual, p. 689; Tacz. F. O. Sib. O. p. 1061; Ridgway, p. 22; Lilford, vi. p. 74, pls. 32, 33; Boyce Hill, Ibis, 1900, p. 526, pl. xi. (eggs).

Labbe Pomarin, French; *Mandrião,* Portug.; *Gabbiano nero,* Ital.; *Mittlere-Raubmöwe,* German; *Middelste-Jager,* Dutch; *Middelkjove,* Dan.; *Bredhalet-Jo,* Norweg.; *Bredstjertad Labb,* Swed.; *Leveapyrstöinen-räiskä,* Finn.; *Pomornik-srednie, Fómka,* Russ.

♂ *ad.* (Færoes). Crown, nape, sides of head, back, wings, and tail deep brown or blackish brown; fore back slightly marked with white; primaries with basal portion and shafts white; middle tail-feathers elongated but blunt; neck all round, chin, and under parts white, the first tinged with golden yellow; a band across the breast and flanks marked and barred with dark brown; under wing-coverts, axillaries, lower abdomen, crissum, and under tail-coverts dark brown, the three last slightly marked with white; bill dark horn, bluish at the base; legs and feet blackish; iris brown. Culmen 1·8, wing 13·8, tail 8·75, the middle feathers 2·7 longer than the lateral ones, tarsus 2·0 inch. In adult birds the middle rectrices are much elongated and almost spatulate, having a curious twist in the shaft which brings the lower surface of the vanes towards the tip to meet in a vertical direction.

Hab. The high northern portions of the Old and New Worlds, in autumn and winter ranging to the British Islands, Scandinavia, and continental Europe south to the Mediterranean, where it is comparatively rare, and on the West African coast south to 23° S.; Northern Siberia, Kamchatka, and the

Commander Islands, south in winter to Japan, Moulmein (once), and Cape York in Australia; Northern North America, in winter south to New Jersey, the Great Lakes, and Callao Bay.

In habits this Skua does not appreciably differ from its allies, and feeds on fish, lemmings, and carrion, and also to a large extent plunders the smaller Gulls and Terns of their prey. Its cry is a short harsh *crah.* It was first found breeding on the Taimyr by von Middendorf in 1843, later in Greenland, and in 1897 on the Yenesei by Mr. Popham. The nest is a hollow in a drier spot in marshy ground, and the 2 eggs vary in ground-colour from stone-grey with a greenish tinge to brownish olivaceous, and are spotted and blotched, chiefly at the larger end, with pale greyish brown and blackish brown, measuring about 2·62 by 1·86.

1156. ARCTIC SKUA.

STERCORARIUS CREPIDATUS.

Stercorarius crepidatus (Banks), in Cook's Voy. Hawksworth's ed. ii. p. 15 (1773); Dresser, viii. p. 471, pls. 611, 612, fig. 2; Saunders, Cat. B. Br. Mus. xxv. p. 327; id. Manual, p. 691; Blanf. F. Brit. Ind. Birds, iv. p. 329; *S. parasiticus* (Bodd, nec. Linn.), Tabl. Pl. Enl. p. 58, No. 991 (1783); (Gould), B. of Gt. Brit. v. pl. 80; (Naum.), x. p. 506, Taf. 272, 273; Tacz. F. O. Sib. O. p. 1056; Ridgway, p. 22; *S. richardsoni* (Swains.), Faun. Bor. Am. Birds, p. 433, pl. 73 (1831); (Hewitson), ii. p. 609, pl. cxliii. fig. 2; (Gould), B. of E. v. pl. 441; Seebohm, B. Jap. Emp. p. 288; (Lilford), vi. p. 75, pl. 34.

Labbe parasite, French; *Cagado,* Portug.; *Cágalo,* Span.; *Labbo,* Ital.; *Struntjäger, Schmarotzer-Raubmöwe,* German; *Kleine Jager,* Dutch; *Spidshalet-Kjove,* Dan.; *Leverjo,* Norweg.; *Vanliga Labb,* Swed.; *Kalapasko-räiskä,* Finn.; *Pomornik-tschujeadnui,* Russ.

♂ *ad.* (Greenland). Crown and sides of head to below the eye, back, wings, and tail dark brown, the head rather paler, the back almost blackish brown; shafts of outer quills white; chin, neck all round, and under parts white; sides and back of neck washed with yellow; breast and lower throat washed with ashy brown; crissum and under tail-coverts dark brown; middle tail-feathers elongated, tapered; bill lead-blue at base, otherwise blackish; legs blackish; iris brown. Culmen 1·5, wing 13·3, tail 8·9, the middle feathers 3·1 longer than the lateral ones, tarsus 1·8 inch. Varieties of this species are not uncommon, which are almost uniform sooty blackish.

Hab. The northern portions of the Old and New Worlds; Greenland, Iceland, the Færoes, N. Norway and Sweden,

N. Russia, Britain; in winter south to the Mediterranean and the West Coast of Africa to the Cape; Northern Siberia, Kamchatka, the Commander and Kurile Islands; in winter south to the Makrán and Sind coasts, Australia and New Zealand; the Arctic regions of North America, south in winter to New York, Illinois, Colorado, and the coast of Brazil.

Like its allies it is a bold, rapacious bird, subsisting chiefly by plunder. It is swift and active on the wing, swims with ease, but does not either dive or plunge. Its cry is plaintive, not unlike the prolonged mew of a cat, and when alarmed it utters a sound between a hiss and a croak. At its breeding places it is exceedingly bold and daring. The nest is a mere hollow in the moss or grass, in which 2 eggs are laid late in May or early in June; these are greenish grey, greenish stone-colour, or olive-brown in ground-colour, more or less spotted and blotched with purplish grey and deep umber-brown, measuring about 2·17 by 1·57. It nests on moors, peat-bogs, or the grassy tops of sea cliffs, usually several pairs near together.

1157. Buffon's Skua.

STERCORARIUS PARASITICUS.

Stercorarius parasiticus (Linn.), Syst. Nat. i. p. 226 (1766); (Gould), B. of E. v. pl. 442; Dresser, viii. p. 481, pl. 612, fig. 1; Saunders, Cat. B. Br. Mus. xxv. p. 334; id. Manual, p. 693; (Lilford), vi. p. 77, pl. 35; *S. longicaudus*, Vieill. Nouv. Dict. xxii. p. 157 (1819); Gould, B. of Gt. Brit. v. pl. 81; Tacz. F. O. Sib. O. p. 1059; Ridgway, p. 23; *L. crepidata* (nec. Gmel.), Naum. x. p. 534, pl. 274; *S. buffoni*, Boie, Isis, 1822, p. 562; (Hewitson), ii. p. 508, pl. cxliii. fig. 1; Seebohm, B. Jap. Emp. p. 289.

Labbe à longue queue, French; *Labbo coda-lunga*, Ital.; *Kleiner Raubmöwe*, German; *Kleinste Jager*, Dutch; *Lille Kjove*, Dan.; *Fjeldjo*, Norweg.; *Fjällabb*, Swed.; *Skaiti*, *Haskil*, Lapp.; *Tunturi-räiskä*, Finn.

♂ *ad.* (Lapland). Differs from *S. crepidatus* in being smaller, the crown, nape, and sides of head glossy blackish brown, the yellow on the cheeks much brighter, the upper parts ashy grey, the middle tail-feathers much longer, and the two first primaries only with white shafts; bill plumbeous at the base, otherwise black; legs plumbeous, with large black patches on the feet; iris dark brown. Culmen 1·15, wing 11·5, tail 13·0, the middle feathers 8·1 longer than the lateral ones, tarsus 1·5 inch.

Hab. The Arctic regions of Europe, Asia, and America, migrating south in the autumn and winter as far as the Straits of Gibraltar; of rare occurrence in the Mediterranean; the

Siberian coasts of the Arctic Ocean; Kamchatka and the Commander and Kurile Islands, migrating south in winter, and has once occurred as far south as between the Sandwich and Philippine Islands. In America it occurs in winter south to Florida and California.

In habits it does not differ from the preceding species, and like it is bold and fearless. During the breeding season at least, it feeds on lemmings, mice, insects, and to a large extent on crowberries. Its cry is described as being a loud dismal shriek, *i-i-i-ah, je-ah, je-oh, je-oh.* It breeds in colonies in the large marshes and moors in the high north, not far from water, the nest being a mere depression in the ground, sometimes lined with a few dry grass-bents, and the eggs, 2 in number, are usually laid in June, and are similar in appearance to those of the Arctic Skua, but as a rule greener in tone and subject to considerable variation. In size they measure about 2·10 by 1·43.

The sexes of the birds included in the present genus do not differ; the young birds are brownish with the upper tail-coverts and under parts barred and the back varied with rufous and brown; those of *S. pomatorhinus* and *S. parasiticus* are darker than those of *S. crepidatus,* but *S. parasiticus* is always distinguishable by having the shafts of the two first primaries only white. The young in down of all three species are brown, those of *S. pomatorhinus* pale sooty brown with a rufous tinge, those of *S. crepidatus* sooty brown above, paler below, and those of *S. parasiticus* are much paler, being greyish brown above and below.

PROCELLARIA, Linn., 1766.

1158. STORM-PETREL.

PROCELLARIA PELAGICA.

Procellaria pelagica, Linn. Syst. Nat. i. p. 212 (1766); Naum. x. p. 557, pl. 275, fig. 1; Hewitson, ii. p. 517, pl. cxlv. fig. 1; (Audub.), B. Am. pl. 340; (Gould), B. of E. v. pl. 448; (id.), B. of Gt. Brit. v. pl. 86; (Dresser), viii. p. 491, pl. 613, fig. 1; Salvin, Cat. B. Br. Mus. xxv. p. 343; Saunders, p. 727; Lilford, vi. p. 123, pl. 53; Ridgway, p. 70.

Thalassidrome tempête, French; *Alma de mestre,* Portug.; *Uccello delle tempeste,* Ital.; *Schwalben-Sturmvogel,* German; *Stormvogeltje,* Dutch; *Lille-Stormsvale,* Dan.; *Liden-Stormsvale, Sörrön-Pedder,* Norweg.; *Stormsvala,* Swed.

♂ *ad.* (Orkneys). General colour sooty black, the under parts paler and browner; median wing-coverts with pale tips; base of upper tail-coverts and of tail, sides of crissum, and under tail-coverts white; tail almost square; bill and legs black; iris dark brown. Culmen 0·58, wing 4·6, tail 2·15, tarsus 0·9 inch. Sexes alike.

Hab. North Atlantic Ocean, breeding on the Færoes, Orkney, and Shetland Islands; of rare occurrence in Scandinavia as far north as the Lofoten Islands; the Mediterranean and the African coasts south to the Cape on the west, and occurs between the Zambesi and Zanzibar on the east side; on the American coasts south to the Banks of Newfoundland; is replaced by *P. tethys*, Bp., off the Galapagos, this species being larger, with the upper tail-coverts white and the tail emarginate.

Essentially an oceanic bird the Storm-Petrel only frequents land for the purpose of nidification. It is tolerably swift on the wing, and skims the waves, following their undulations. It feeds on any fatty substance on the surface of the water, small molluscs, &c. During the breeding season it frequents islands, usually remaining in the holes during the day and wandering out to sea in the night. Late in June a single egg is deposited in a hole, or amongst the stones, the nest being scantily lined with plant-stems. The egg is rather elongated-oval in shape, the surface of the shell rather chalky, white in colour, generally with a zone of pale reddish dots round one end, and measures about 1·12 by 0·85.

OCEANODROMA, Reich., 1852.

1159. LEACH'S PETREL.

OCEANODROMA LEUCORRHOA.

Oceanodroma leucorrhoa (Vieill.), Nouv. Dict. xxv. p. 422 (1817); (Dresser), viii. p. 497, pl. 613, fig. 2; Salvin, Cat. B. Br. Mus. xxv. p. 348; Tacz. F. O. Sib. O. p. 1067; Ridgway, p. 71; Saunders, p. 729; (Lilford), vi. p. 127, pl. 54; *Thal. leachi*, Temm. Man. d'Orn. ii. p. 812 (1820); (Naum.), x. p. 575, Taf. 275, fig. 2; (Hewitson), ii. p. 520, pl. cxlv. fig. 2; Gould, B. of E. v. pl. 447; id. B. of Gt. Brit. v. pl. 85.

Thalassidrome cul-blanc, French; *Procellaria a coda forcuta* Ital.; *Gabelschwänziger-Schwalbensturmvogel*, German; *Stor-Stormsvale*, Dan.; *Klöfthalet-Stormsvale*, Norweg.; *Klyckstjertad-Stormsvala*, Swed.; *Umi-tsubame*, Jap.

♂ *ad.* (Bay of Fundy). General colour sooty blackish brown, the head, breast, and back tinged with grey; inner secondaries and wing-coverts brownish grey, paler at the tips; upper tail-coverts white, some with narrow dark edges; tail forked; lateral under tail-coverts white, the central ones sooty brown; bill and feet black; iris dark brown. Culmen 0·75, wing 6·0, tail 3·5, tarsus 1·0, bare portion of tibia 0·3 inch.

Hab. Seas of Northern Europe, Asia, and America, wandering south in winter to the coasts of continental Europe and the Mediterranean; of rare occurrence in Scandinavia; Eastern Siberia, the Commander Islands, and Japan; the Atlantic and Pacific coasts of N. America; south to Virginia and California.

In habits it resembles *P. pelagica*, and is, like that bird, essentially oceanic. It breeds on many of the Hebrides, and on the islands off the east coasts of North America, selecting in preference grassy places where it can burrow under the sods, but it also burrows under rocks. Early in June a single egg is laid, which is like that of *P. pelagica* but larger, measuring about 1·33 by 0·95. The nest is a small pad of dry grasses placed at the end of the nest-hole.

1160. HARCOURT'S PETREL.

OCEANODROMA CASTRO.

Oceanodroma castro (Harcourt), A Sketch of Madeira, p. 123 (1851); Ogilvie Grant, Ibis, 1898, p. 314; Saunders, p. 731; *O. cryptoleucura*, Ridgway, Proc. U.S. Nat. Mus. iv. p. 337 (1882); id. Manual, p. 71; Dresser, ix. p. 395, pl. 718; Scott Wilson, Aves Haiwaiiensis, p. 209 and pl.; (Lilford), vi. p. 130, pl. 55.

♂ *ad.* (Porto Santo). Differs from *O. leucorrhoa* in being rather browner in tone of colour, the tail less deeply forked, all the feathers but the middle ones white on the basal quarter; upper tail-coverts white tipped with black. Culmen 0·85, wing 6·0, tail 2·8, the middle feathers 0·2 shorter than the lateral ones, tarsus 0·85 inch.

Hab. Sandwich and Galapagos Islands, and the South Atlantic Ocean, breeding as far north as the islets between Cape Verde Islands and Madeira; has once strayed to England and twice to Denmark.

In habits it does not differ from its allies, and, like those, breeds in holes, depositing in June a single egg, which is white, sometimes with a wreath of red spots round the larger end, and in size measures about 1·26 by 0·98.

1161. SOOTY PETREL.

OCEANODROMA FULIGINOSA.

Oceanodroma fuliginosa (Gmel.), Syst. Nat. i. p. 562 (1788); Stejn. Pr. U.S. Nat. Mus. xvi. p. 620 (1893); Salvin, Cat. B. Br. Mus. xxv. p. 352.

Ad. Crown, occiput, hind neck, back, scapulars, and upper rump uniform dark sooty slate, darker and more sooty on posterior scapulars, the longest feathers of which are distinctly paler at ends, with a narrow terminal margin of brownish white; lesser and uppermost, median and greater wing-coverts sooty black; rest of wing-coverts and tertials light greyish brown (between "broccoli" and "hair-brown"); alula, primary coverts, and remiges uniform sooty black; lower rump light greyish brown; upper tail-coverts and tail sooty black; anterior portion of head all round silky deep sooty grey or greyish brown, deepening gradually into the darker colour of the occiput, &c.; under parts uniform sooty greyish brown (much like the colour of the greater wing-coverts), the under wing-coverts rather lighter and more tinged with brown; bill and feet black. Total length (skin) about 10·00 inches, wing 7·50, tail 4·45, forked for 1·60, culmen 0·70, depth of bill just before nasal tubes 0·25, tarsus 1·10, middle toe with claw 1·10.

Hab. Japanese seas.

I have not had an opportunity of examining a specimen of this Petrel, and have therefore reproduced Mr. Ridgway's description, furnished to Mr. Salvin (Cat. B. Br. Mus. xxv. p. 353). Nothing appears to be known respecting the habits and nidification of this species.

1162. JAPANESE BLACK PETREL.

OCEANODROMA TRISTRAMI.

Oceanodroma tristrami, Stejn. M.S. Salvin, Cat. B. Br. Mus. xxv. p. 354; *O. melania* (Seeb., nec. Bp.), B. Jap. Emp. p. 270 (1890).

♂ *ad.* (Japan). Anterior portion of head all round sooty greyish brown (decidedly darker than in *O. homochroa*), changing gradually to sooty blackish slate on hinder crown, occiput, and hind neck, and to deep greyish sooty brown on fore neck and chest; rest of under parts light greyish sooty brown, each feather indistinctly tipped with darker (colour of chest), producing a very faint transversally mottled appearance, the under tail coverts, however, uniform, though the colour gradually becomes darker towards ends of longer feathers; under wing-coverts uniform light greyish sooty brown, those along edge of wing much darker, with pale margins; back, scapulars, and upper rump sooty slate-colour, each feather with one or two very indistinct darker bars, and tipped with a more decided slaty hue; lesser wing-coverts and tertials darker greyish sooty brown, the longer of the latter narrowly margined with paler; middle and greater wing-coverts and innermost secondaries light greyish brown, the margins of the secondaries and approximate coverts sooty-blackish; lower rump light greyish brown (like large wing-coverts); upper tail-coverts and tail dark greyish brown (much paler than remiges), each feather showing a subterminal broad transverse spot of a darker shade of the same colour; bill and feet black. Total length (skin) about 9 inches, wing 6·20, tail 3·78, forked for 1·6, culmen 0·70, depth of bill through middle 0·20, tarsus 1·10, middle toe with claw 1·12.

Hab. Japan.

Not having been able to examine a specimen of this Petrel, I have, as before, been obliged to copy the description in the Brit. Mus. Catalogue. Nothing appears to be on record respecting the habits or nidification of this species.

1163. SWINHOE'S PETREL.

OCEANODROMA MONORHIS.

Oceanodroma monorhis (Swinhoe), Ibis, 1867, p. 386; (David and Oust.), Ois. Chine, p. 515; Salvin, Cat. B. Br. Mus. xxv. p. 356, pl. ii.

Ad. (China). Differs from *O. tristrami* in being somewhat smaller; it lacks the lighter rump patch, and has the light-coloured wing area more restricted, the tail less deeply forked and the primaries much less short and pointed. Culmen 0·8, wing 6·0, tail 2·9, the central feathers 0·7 shorter than the lateral ones, tarsus 0·9, middle toe 0·9, inner toe 0·7 inch.

Hab. Coasts of China and Japan.

Respecting the habits and nidification of this species I find nothing on record, except that it is said to breed on the desert islands north-east of Formosa.

1164. FORK-TAILED PETREL.

OCEANODROMA FURCATA.

Oceanodroma furcata (Gmel.), Syst. Nat. i. p. 561 (1788); (Gould), Zool. Voy. "Sulphur," p. 50, pl. 33; (Seebohm), B. Jap. Emp. p. 271; Tacz. F. O. Sib. O. p. 1068; Ridgway, p. 70; Salvin, Cat. B. Br. Mus. xxv. p. 357.

♂ *ad.* (Kurile Islands). General colour bluish grey, the scapulars, wings externally, and space below the eye black; the outer tail-feathers on each side with the outer web white nearly to the tip; wing-coverts edged with greyish white; chin, throat, and under tail-coverts nearly white; bill and feet black. Culmen 0·83, wing 6·25, tail 3·6, the middle feathers 0·74 shorter than the lateral ones, tarsus 1·03.

Hab. North Pacific Ocean, south to Oregon, and the Kurile Islands.

In habits this Petrel is said not to differ from its allies. It breeds on small islands off Unalaska, on Copper Island and the Kuriles, in holes 3 feet or more deep in the steep basaltic rocks, depositing in July a single glossless white egg, sometimes marked at the larger end with purplish black or lilac dots or spots, and measuring about 1·31 by 1·00.

OCEANITES, Keyserl. and Blas., 1840.

1165. WILSON'S PETREL.

OCEANITES OCEANICUS.

Oceanites oceanicus (Kuhl.), Beitr. p. 136, Tab. x. fig. 1 (1820); Dresser, viii. p. 505, pl. 614, fig. 1; Salvin, Cat. B. Br. Mus. xxv. p. 358; Blanf. F. Brit. Ind. Birds, iv. p. 354; Saunders, p. 733; Ridgway, p. 71; Lilford, vi. p. 131, pl. 56; *O. wilsoni* (Bp.), Journ. Acad. Philad. iii. p. 231, pl. 9, fig. 2 (1823); (Audubon), B. N. Am. pl. 270; Gould, B. of Austral. vii. pl. 65.

Casquilho, Portug.; *Pastorcito,* Span.

♂ *ad.* (off Fayal). Sooty black with a greyish tinge, especially on the head and neck; wing-coverts brownish, some of the middle ones marked with greyish white; sides of rump and of under tail-coverts, and lower flanks white; tail nearly even; bill and legs black, the basal half of the webs yellow; iris dark brown. Culmen 0·65, wing 5·75, tail 3·0, tarsus 1·3, bare part of tibia 0·65 inch.

Hab. Atlantic Ocean, north to the coasts of Labrador and of the British Isles, south to the Ice-barrier in the Antarctic Ocean; the Indian Ocean north to the Mekrán coast; the Australian seas and New Zealand.

In habits it resembles *P. pelagica,* and like it is essentially an ocean bird. It was found breeding on Kerguelen Island in January and February, by the Rev. A. E. Eaton, and since then plentifully on South Victoria Land, Antarctic regions. The single egg is laid in dry chinks and crevices under rocks, and is like that of *P. pelagica,* but speckled and dotted chiefly round one end with pink, and measures about 1·30 by 0·92.

The young in down of all the preceding species of Petrels are covered with sooty brownish or greyish down from which they moult into the adult dress.

PELAGODROMA, Reichenb., 1852.

1166. FRIGATE PETREL.

PELAGODROMA MARINA.

Pelagodroma marina (Lath.), Ind. Orn. ii. p. 826 (1790); (Gould), B. of Austral. vii. pl. 61; Dresser, ix. p. 399, pl. 719; Salvin, Cat. B. Br. Mus. xxv. p. 362; Ridgway, p. 72; Saunders, p. 735; Lilford, vi. p. 134, pl. 57.

Ad. (Teneriffe). Upper parts slaty brown, darker on the crown and lower back, paler and greyer on the dorsal region, the feathers with slightly paler margins; lower rump and upper tail-coverts pale slate-grey, the latter with narrow white margins; wings and tail blackish brown; secondaries and wing-coverts margined and tipped with whitish; a patch below the eye beyond the ear-coverts dark slaty brown; forehead, superciliary stripe, and under parts white; bill and legs black, the webs yellow with a dark edge. Culmen 0·9, wing 6·0, tail 3·35, the middle feathers 0·42 shorter than the lateral ones, tarsus 1·7 inch. Sexes alike.

Hab. Seas of the Southern Hemisphere, north to the Canary Islands and the Salvages; has occurred on the coast of Massachusetts once, and twice off those of Great Britain.

In habits this bird does not appear to differ from Leach's and the Storm Petrel. It has been found breeding on the Salvage Isles, on the Chatham and Houtmann's Abrolhos Islands, and on Nightingale Island, one of the Tristan da Cunha group. It nests in holes in the ground, depositing in April in the Salvages, in December in the Australian seas, a single white egg, finely spotted and often zoned at one end with fine reddish or purplish dots, and measuring about 1·47 by 1·07.

PUFFINUS, Briss., 1760.

1167. MANX SHEARWATER.

PUFFINUS ANGLORUM.

Puffinus anglorum (Temm.), Man. d'Orn. ii. p. 807 (1820); (Hewitson), ii. p. 514, pl. cxliv. fig. 1; Gould, B. of E. v. pl. 443; id. B. of Gt. Brit. v. pl. 84; Dresser, viii. p. 517, pl. 615, fig. 1; Salvin, Cat. B. Br. Mus. xxv. p. 377; Saunders, p. 741; Lilford, vi. p. 140, pl. 60; *P. puffinus*, Linn. Syst. Nat. i. p. 213 (1766); Ridgway, p. 60; *P. arcticus*, Faber, Prodr. Isl. Orn. p. 156 (1822); Naum. x. p. 618, Taf. 277.

Pétrel Manks, French; *Furabuxo, Chirêta,* Portug.; *Animas, Diablos,* Span.; *Berta-minore,* Ital.; *Nordischer Taucherslurmvogel,* German; *Noordsche-Pijlstormvogel,* Dutch; *Skropa,* Icel.; *Almindelig Skraape,* Dan.; *Lire,* Norweg.; *Mindre Lira,* Swed.

♂ *ad.* (Orkney). Crown, sides of head, and upper parts generally black, the sides of head slightly marked with white; the hind neck tinged with grey; entire under parts, flanks, and under wing-coverts white; upper mandible blackish brown; lower mandible bluish horn; iris dark brown; legs bluish flesh-colour. Culmen 1·6, wing 9·3, tail 3·2, tarsus 1·9 inch.

Hab. North Atlantic Ocean; Iceland, the Færoes; the British Islands; of occasional occurrence on the coasts of Norway, Sweden, Denmark, Holland, and Germany, more common in Western Europe, Morocco, Canaries, and Madeira; the Atlantic coast of America, south to Brazil.

Essentially an ocean bird it only visits land during the breeding season, and may be seen far out at sea gliding with a Swift-like flight, close to the surface of the water. During the nesting season it is partly crepuscular, remaining in its hole during the day, and coming out in the evening. It breeds in burrows in the soil on cliffs, placing its single egg either on the bare ground or on a scanty pad of dry herbage at the end of its hole. The eggs, which are laid in May or early in June, are white, smooth in texture, and measure about 2·37 by 1·65.

1168. SUBSP. PUFFINUS YELKOUANUS.

Puffinus yelkouanus (Acerbi), Bibl. Ital. cxl. p. 294 (1827); Salvin, Cat. B. Br. Mus. xxv. p. 379; *P. baroli*, Bonelli, fide Bp. Compt. Rend. xlii. p. 769 (1856).

♂ *ad.* (Bosphorus). Closely resembles *P. anglorum*, but has the upper parts rather paler and browner; the under tail-coverts as a rule dusky brown, and the axillaries brown towards the tips. Culmen 1·9, wing 9·0, tail 2·75, the middle feathers about 0·15 longer than the lateral ones, tarsus 1·8, middle and outer toes 1·95, inner toe 1·55.

Hab. The Mediterranean; has occurred off the coasts of Northumberland, Yorkshire, Devonshire, and Cornwall.

This is a very doubtful southern form or race of our Manx Shearwater, which does not differ in habits or nidification from that species. It breeds in the Mediterranean, chiefly on the islands in the eastern portion.

1169. GREAT SHEARWATER.

PUFFINUS GRAVIS.

Puffinus gravis (O'Reilly), Voy. to Greenland, &c., p. 140, pl. 12, fig. 1 (1818); Salvin, Cat. B. Br. Mus. xxv. p. 373; Saunders, p. 737; *P. major* (Faber), Prodr. Isl. Orn. p. 56 (1822); Gould, B. of Gt. Brit. v. pl. 83; Dresser, viii. p. 527, pl. 616, fig. 2; Ridgway, p. 59; Lilford, vi. p. 136, pl. 58; *P. cinereus*, Nutt. Man. Water Birds, p. 334 (1834).

Stora skrofa, Icel.

♂ *ad.* (S. England). Crown, sides of head, nape, and upper parts deep brown, the feathers of the upper parts with paler margins; wings and tail darker; lower hind neck white tinged with brown; lower part of upper tail-coverts white marked with brown; under parts and under wing-coverts white; under tail-coverts greyish brown tipped with white; bill blackish horn; outside of tarsus and exterior toe brownish, rest of feet and webs yellowish flesh; iris dark brown. Culmen 2·35, wing 12·6, tail 4·7, tarsus 2·38, middle toe 2·65 inch. Sexes alike.

Hab. The Atlantic Ocean from Greenland, Iceland, and the Færoe Isles south to the Cape of Good Hope and Falkland Islands, appears occasionally in vast flocks off the Hebrides.

In general habits it does not differ from *P. anglorum*. Nothing definite is known of its nidification, and authentic eggs are still wanting.

1170. SOOTY SHEARWATER.

PUFFINUS GRISEUS.

Puffinus griseus (Gmel.), Syst. Nat. i. p. 564 (1788); Dresser, viii. p. 523, pl. 616, fig. 1; Seebohm, B. Jap. Emp. p. 266; Salvin, Cat. B. Br. Mus. xxv. p. 386; Saunders, p. 739; Lilford, vi. p. 138, pl. 59; Ridgway, p. 61; *P. fuliginosus*, Strickl. P.Z.S. 1832, p. 129; *P. stricklandi*, Ridgw. Manual, p. 61 (1896).

♂ *ad.* (S. England). Upper parts sooty blackish brown with a chocolate tinge, the head, lower back, wings, and tail darker, the dorsal feathers with faintly paler edges; under parts greyer; the chin and upper throat dark ashy grey; under wing-coverts greyish white with dark shafts and marbled with brown; bill brownish black, paler on the edge of the lower mandible; outer portion of tarsus and outer toe blackish brown; rest of legs and feet dull brownish ochreous; iris dark brown. Gape 2·25, wing 11·85, tail 3·7, tarsus 2·22, middle toe 2·8 inch. Sexes alike.

Hab. Generally distributed throughout the seas of both hemispheres from the Færoes and Banks of Newfoundland to the

Cape of Good Hope and Straits of Magellan, and in the Pacific from California and the Kurile Islands to Australia, New Zealand, and the Auckland Islands. Breeds in the southern hemisphere.

In habits this species does not differ from its allies. It nests in holes in the ground, depositing a single egg, white stained with reddish brown, which measures about 3·25 by 2·0.

1171. MEDITERRANEAN SHEARWATER.

PUFFINUS KUHLI.

Puffinus kuhli (Boie), Isis, 1835, p. 257; Dresser, viii. p. 513, pl. 615, fig. 2; Salvin, Cat. B. Br. Mus. xxv. p. 375; Ridgway, p. 59; *P. cinereus*, Gould, B. of E. v. pl. 445; *P. borealis*, Cory, Bull. Nutt. Orn. Club. vi. p. 84 (1881); Ridgway, p. 59; *P. major* (nec. Temm.), Hewitson, ii. p. 516, pl. cxliv. fig. 3.

Puffin cendré, French; *Pardella de bico branco*, Portug.; *Berta-maggiore*, Ital.; *Ciefa*, Maltese.

Ad. (Algerian coast). Upper parts cinereous brown, the sides of the head and neck paler and greyer; back and wing-coverts with paler margins; wings and tail blackish brown; under parts pure white; under tail-coverts mottled at the edge; bill livid yellowish, brownish horn towards the point; legs and feet livid yellowish; iris dark brown. Culmen 2·8, wing 13·6, tail 5·6, tarsus 2·1 inch. Sexes alike.

Hab. The Mediterranean, and the Atlantic Ocean from the Massachusetts coast to Madeira and the Canaries; Kerguelen Island.

In habits it does not differ from *P. anglorum*. It nests on the islands of the Mediterranean and in the Canaries, depositing, in holes in the ground or crannies in the cliffs, a single white egg, measuring about 2·61 by 1·73.

1172. JAPANESE SHEARWATER.

PUFFINUS LEUCOMELAS.

Puffinus leucomelas, Temm. Pl. Col. 587 (1836); id. and Schleg. Faun. Jap. Aves, pl. 85; Seebohm, B. Jap. Emp. p. 264; Salvin, Cat. B. Br. Mus. xxv. p. 370; Ridgway, p. 62.

Ad. (Japan). Crown, nape, sides of head and of neck white closely striped and marked with blackish brown; hind neck, upper parts, wings and tail deep brown, the dorsal feathers with narrow greyish white or greyish brown margins; some of the upper tail-coverts tipped with white; under parts and axillaries white; under wing-coverts near the edge of the wing with dark discs; bill horn-colour; legs and feet flesh-coloured, the outer toe darker. Culmen 2·35, from the base of the feathers 2·0, wing

12·6, tail 5·4, lateral feathers 1·6 shorter than the middle ones, tarsus 1·85 middle toe with claw 2·5 inch.

Hab. The seas of Japan and Corea, southwards to the Philippines, N. Borneo, Moluccas, and the northern coast of Australia.

I find nothing on record respecting the habits or nidification of this species.

1173. FLESH-COLOURED SHEARWATER.

PUFFINUS CARNEIPES.

Puffinus carneipes, Gould, P.Z.S. 1844, p. 57 ; id. B. of Austral. vii. pl. 57 ; Seebohm, B. Jap. Emp. p. 265 ; Salvin, Cat. B. Br. Mus. xxv. p. 385 ; Ridgway, p. 62.

♂ *ad.* (Japan). Entire plumage dark sooty chocolate-brown, the throat and under parts rather paler and greyer ; under wing-coverts and axillaries sooty brown ; bill fleshy white, the culmen and tips of mandibles brown ; legs, feet, and interdigital membranes yellowish flesh-colour. Culmen 2·3, wing 12·8, tail 5·0, tarsus 2·2, middle toe with claw 2·65 inch.

Hab. The Australian and New Zealand seas, north to the Japanese seas.

Respecting the habits of this bird I find practically nothing on record, but it doubtless does not differ from its allies. It breeds on the small islands off Cape Leeuwin on the coast of Australia, nesting in holes in the ground, and deposits a single white egg, which measures about 2·93 by 1·98.

1174. SLENDER-BILLED SHEARWATER.

PUFFINUS TENUIROSTRIS.

Puffinus tenuirostris (Temm.), Pl. Col. 587 (1835) ; (id.) and Schleg. Faun. Jap. Aves, p. 131, pl. 86 (1842) ; Seebohm, B. Jap. Emp. p. 267 (1890) ; Tacz. F. O. Sib. O. p. 1066 ; Salvin, Cat. B. Br. Mus. xxv. p. 338 ; Ridgway, p. 62 ; *P. brevicaudus*, Brandt, Icon. Russ. Av. Tab. vi. fig. 171 (1836) ; Gould, B. of Austral. vii. pl. 56.

♂ *ad.* (Japan). Differs from *P. carneipes* in having the upper parts paler with paler margins to the feathers ; under parts paler and more ashy in tinge ; the throat with a bluish tinge ; the breast and abdomen feathers with slightly paler margins ; under wing-coverts paler grey ; bill fleshy horn-colour ; tarsi and toes yellowish, outwardly darker. Culmen 2·3, from base of feathers 1·9, wing 12·5, tail 5·3, tarsus 2·5 inch.

Hab. Pacific Ocean north to Kamchatka and Alaska ; the Kurile Islands, Japan, and the coasts of Corea ; south to the Australian and New Zealand seas.

Is said to spend the day out at sea and the night in its nest hole. Its flight is direct and very swift, and its food consists of small shrimps, crustaceans, and molluscs. Immense numbers breed on the islands in Bass's Straits, nesting in holes burrowed in the ground, depositing late in November each a single white egg, which measures about 2·75 by 1·88.

1175. Cahow.

PUFFINUS OBSCURUS.

Puffinus obscurus (Gmel.), Syst. Nat. i. p. 559 (1788); Gould, B. of E. v. pl. 444; Audub. B. N. Am. pl. 299; Dresser, ix. p. 403, pl. 720; Salvin, Cat. B. Br. Mus. xxv. p. 382; Lilford, vi. p. 141, pl. 61; *P. auduboni*, Finsch, P.Z.S. 1872, p. 111; Ridgway, p. 60; *P. tenebrosus*, Natt. fide Pelz. Ibis, 1873, p. 47; Ridgway, p. 60.

Cahow, in Bermuda.

Ad. (Bermudas). Upper parts slaty black; under parts white extending to the eye; feathers on the sides of the head and neck mottled; under wing-coverts white; axillaries white slightly marked with slaty black at the tip; bill blackish plumbeous paler on the lower mandible; outside of tarsus and the outer toe blackish plumbeous, the rest fleshy yellow; iris blackish brown. Culmen 1·45, wing 7·0, tail 3·2, tarsus 1·5 inch. Sexes alike.

Hab. The tropical and subtropical seas of the whole world; the eastern coasts of North America from New Jersey to Florida and formerly in abundance in Bermuda; of accidental occurrence on the coasts of the British Islands.

In habits this Shearwater resembles *P. anglorum*, and like that species nests in holes in the ground or in rocks, or under projecting rocks, depositing in March a single white egg like that of *P. anglorum*, but smaller, measuring about 2·05 by 1·40.

1176. Eastern Dusky Shearwater.

PUFFINUS ASSIMILIS.

Puffinus assimilis, Gould, P.Z.S. 1837, p. 156; id. B. of Austral. vii. pl. 59; Dresser, ix. p. 407; Salvin, Cat. B. Br. Mus. xxv. p. 384; Ridgway, p. 61; Saunders, p. 743; *P. nugax*, Solander, M.S. Bp. Consp. ii. p. 205 (1856); *P. bailloni*, Bp. Compt. Rend. xlii. p. 769 (1856).

Ad. (Porto Santo). Differs from *P. obscurus* in having the upper parts rather bluer in tinge, the white extending rather more round the eye and on the lores; under wing-coverts, axillaries, and under tail-coverts pure white; outer portion of inner web of primaries white except at the tip;

bill dark horn-colour; tarsi and toes greenish yellow; webs yellowish orange; iris dark brown. Culmen 1·2, wing 7·1, tail 2·85, tarsus 1·42 inch.

Hab. The Australian and New Zealand seas; the Atlantic north to the Canaries and Madeira; has occurred on the coasts of Great Britain at least twice.

In habits it resembles *P. obscurus.* Mr. Grant says that it is a very silent bird, but Mr. Boyd Alexander states that when on the wing it continually utters a weird cry, *karki-karrou, karki-karrou, karki-karrou.* It breeds in holes, under boulders, and in clefts of rocks, depositing a single white egg, which measures about 1·70 by 1·32.

I have carefully compared specimens from the North Atlantic with those from Australia, and fail to find any difference, therein agreeing with Mr. Salvin.

ŒSTRELATA, Bp., 1855.

1177. CAPPED PETREL.

ŒSTRELATA HÆSITATA.

Œstrelata hæsitata (Kuhl.), Beitr. p. 142 (1820); Dresser, viii. p. 545, pl. 618; Salvin, Cat. B. Br. Mus. xxv. p. 402; Saunders, p. 745; Ridgway, p. 66; Lilford, vi. p. 148, pl. 64.

Diablotin of French Creoles.

Ad. (Hayti). Crown and nape blackish brown, the feathers white at the base; in front of and below the eye a few greyish black feathers extending to the ear-coverts; upper parts sooty brown; back of neck, upper tail-coverts, anterior lores, and the whole of the under parts white; tail white on the basal two-thirds, black on the terminal third; bill black; legs and feet yellow, the terminal portion of the toes and webs black. Culmen 1·7, wing 11·4, tail 6·1, tarsus 1·52 inch.

Hab. The Lesser Antilles; Dominica and Guadaloupe; has occurred once in France and once in Great Britain; once in Hungary.

In habits it is said to be nocturnal, and lays up in holes during the day, roaming about in search of food at night. It breeds in holes, but, so far as I can ascertain, no collection is in possession of an egg of this species.

1178. SOFT-PLUMAGED PETREL.

ŒSTRELATA MOLLIS.

Œstrelata mollis (Gould), Ann. and Mag. N. H. xiii. p. 363 (1844); (id.), B. of Austral. vii. pl. 50; Ridgway, p. 63; Dresser, ix. p. 411, pl. 721; Salvin, Cat. B. Br. Mus. xxv. p. 406.

♂ *ad.* (Funchal). Upper parts slate-grey, the head rather darker; feathers on the forehead margined with white; a blackish grey patch in front of and below the eye; wings blackish brown; tail grey, the lateral feathers freckled with white; lores, throat, and under parts white, the sides of the breast grey, the flanks freckled with grey; bill blackish; tarsus and basal portion of feet yellowish flesh, the rest black; iris dark brown. Culmen 1·3, wing 10·4, middle tail-feathers 4·65, the lateral ones 3·25, tarsus 1·4 inch.

Hab. The Southern Seas, in the Atlantic north to Madeira.

Respecting the habits of this bird I find but little on record. Its flight is described as peculiarly rapid and graceful, and it is generally seen in small companies. It nests in New Caledonia about the summit of Mount Mou in burrows, depositing a single white egg, which measures about 2·1 by 1·6.

1179. COLLARED PETREL.

ŒSTRELATA BREVIPES.

Œstrelata brevipes (Peale), U.S. Expl. Exp. viii. p. 294, pl. 80 (1848); Stejn. Proc. U.S. Nat. Mus. xvi. p. 617; Salvin, Cat. B. Br. Mus. xxv. p. 408; Ridgway, p. 65; Saunders, p. 747; Lilford, vi. p. 146, pl. 63; *P. torquata*, Macgillivray, Zool. xviii. p. 7133; *Œst. leucoptera*, Salvin, Ibis, 1876, p. 393.

Ad. (New Hebrides). Forehead, cheeks, throat, and under parts white; upper parts slaty greyish black, the crown paler, the dorsal region, larger wing-coverts, and upper tail-coverts grey; tail greyish black, the lateral feathers pale grey; sides of breast slate-grey; under wing-coverts and axillaries white; bill black; tarsus and proximal half of the two inner toes yellowish, the rest black. Culmen 1·3, wing 8·55, tail 3·92, the outer feathers 1·15 shorter than the middle ones, tarsus 1·0 inch.

Hab. Western Pacific Ocean, New Hebrides, Fiji Islands; south to about 68° S.; has been once obtained near Aberystwith on the Welsh Coast.

According to John Macgillivray, this Petrel breeds in burrows on the wooded mountain-tops of the interior of Aniteum, New Hebrides, but its eggs were not obtained.

1180. JAPANESE PETREL.

ŒSTRELATA LONGIROSTRIS.

Œstrelata longirostris, Stejn. Pr. U.S. Nat. Mus. xvi. p. 618 (1893); Salvin, Cat. B. Br. Mus. xxv. p. 418.

Ad. (Japan). Differs from *Œst. brevipes* in having the greater wing-coverts lighter slate-grey, distinctly though narrowly margined with white; the feathers on the back with paler (white) and more distinct terminal margins, the dusky border to under side of wings narrower and interrupted along the outer margin, the inner webs of primaries with a conspicuous lengthened wedge of pure white. Culmen 0·95, depth of bill through middle 0·25, wing (primaries moulting), tail 3·80, its gradation 0·75, tarsus 1·25, middle toe with claw 1·40 inch.

Hab. Japanese coasts.

I have not been able to examine a specimen of this bird, and have therefore copied Mr. Ridgway's description. Only two specimens, in the Science College Museum, Tokyo, Japan, are known.

It is possible that *Œstrelata fisheri*, Ridgway, which has occurred near Alaska, may possibly occur also on the Asiatic side.

BULWERIA, Bp., 1842.

1181. Bulwer's Petrel.

BULWERIA COLUMBINA.

Bulweria columbina (Webb and Berth.), Orn. Canar. p. 44, pl. 4, fig. 2 (1841); Dresser, viii. p. 551, pl. 614, fig. 2; (Lilford), vi. p. 144, pl. 62; *B. bulweri* (Jard. and Selby), Ill. Orn. ii. pl. 65 (1825–43); (Hewitson), ii. p. 522, pl. cxlv. fig. 3; (Gould), B. of E. v. pl. 449; Salvin, Cat. B. Br. Mus. xxv. p. 420; Ridgway, p. 69; Saunders, p. 749.

♂ *ad.* (Dezertás). Entire plumage sooty brownish black, the upper parts darker, the under parts paler and browner; wings blackish brown, the larger coverts dull light brown at the tips; tail black, cuneate; bill black; legs brown; iris deep brown. Culmen 1·0, wing 7·7, tail 4·5, the lateral feathers about 1·5 shorter than the middle ones, tarsus 1·1 inch.

Hab. The temperate North Atlantic Ocean, chiefly near the Canaries and Madeira; temperate North Pacific Ocean; has once strayed to the British Isles, and is said to be of accidental occurrence at the Bermudas, and near the coast of Greenland.

In habits it resembles *O. leucorrhoa* and *P. pelagica*, and is said to be to a large extent nocturnal. It breeds in holes or under rocks, depositing in June a single white egg, which measures about 1·74 by 1·24.

FULMARUS, Steph., 1826.

1182. Fulmar.

FULMARUS GLACIALIS.

Fulmarus glacialis (Linn.), Syst. Nat. i. p. 213 (1766); (Naum.), x. p. 589, Taf. 276; (Hewitson), ii. p. 512, pl. cxliv. fig. 2; (Gould), B. of E. v. pl. 446; (id.), B. of Gt. Brit. v. pl. 52; Dresser, viii. p. 535, pl. 617; Salvin, Cat. B. Br. Mus. xxv. p. 425; Ridgway, p. 57; Lilford, iv. p. 150, pl. 65; *F. minor* (Kjærb.), J. f. O. 1854, p. lix.; Ridgway, p. 57.

Pétrel Fulmar, French; *Eis-Sturmvogel*, German; *Noordsche-Stormvogel*, Dutch; *Filúngr*, *Fill*, Icel.; *Is-Stormfugl*, Dan.; *Stormfugl*, *Havhest*, Norweg.; *Stormfågel*, Swed.

♂ *ad.* (St. Kilda). Head, neck, and under parts white, the throat slightly tinged with yellow; a dark spot in front of the eye; upper parts blue-grey, darker on the wings and fading to greyish white on the tail; culmen to nares sea-green; nasal tube blackish olivaceous, rest of the bill greenish yellow (the whole bill sometimes dark); legs delicate French-grey; iris dark hazel-brown. Culmen 1·8, wing 13·0, tail 5·2, tarsus 2·05 inch. This species has a dark phase of plumage in which the general colour is dull ashy grey, the under parts paler, as well as a much lighter form in which the mantle is nearly as light as the belly.

Hab. North Atlantic Ocean.

Essentially an oceanic bird the Fulmar is rarely seen near land except during the breeding season, or when driven in by stress of weather. It frequently attends fishermen when the lines are being hauled in, to share in the spoil, and is seldom molested by them. It breeds on high cliffs skirting the ocean, the nest being a hollow in the ground scantily lined with grass, and in May a single egg is deposited, which is white, rather rough in texture of shell, with a strong musky smell, and measures about 2·89 by 2·0.

1183. Subsp. Fulmarus glupischa.

Fulmarus glupischa, Stejn., Auk, i. p. 234 (1884); Tacz. F. O. Sib. O. p. 1064; Salvin, Cat. B. Br. Mus. xxv. p. 427; Ridgway, p. 57; *F. pacificus* (nec. Gmel.), (Aud.) Orn. Biogr. v. p. 331 (1839); Blakist. and Pryor, Trans. As. Soc. Jap. x. p. 106.

Ad. (Kuriles). In the light phase of plumage differs only from *F. glacialis* in having the nasal tube, and the whole bill yellow; in the dark phase much darker, being uniform dark sooty plumbeous.

Hab. North Pacific Ocean; Kamchatka, the Commander, Aleutian, and Kurile Islands; on the American side south to Western Mexico.

In habits and nidification this bird does not differ from *F. glacialis*, and its eggs are undistinguishable from those of that bird.

DIOMEDEA, Linn., 1766.

1184. SHORT-TAILED ALBATROSS.

DIOMEDEA ALBATRUS.

Diomedea albatrus, Pall. Spic. Zool. v. p. 28 (1780); David and Oust. Ois. Chine, p. 516; Seebohm, B. Jap. Emp. p. 261; Tacz. F. O. Sib. O. p. 1068; Salvin, Cat. B. Br. Mus. xxv. p. 444; Ridgway, p. 51; *D. brachyura*, Temm. Pl. Col. livr. 79 (1829); id. and Schleg. Faun. Jap. Aves, p. 132, pl. 87; Gould, B. of Austral. vii. pl. 39; *D. derogata*, Swinhoe, P.Z.S. 1873, p. 786.

Ahodori, Jap.

♂ *ad.* (Japan). White, the head and neck tinged with buffy yellow; wings and tail slaty brown; quills with shafts yellowish white; bill yellowish horn; legs and feet bluish white. Culmen 5·55, wing 22·0, tail 6·25, tarsus 3·9 inch. Sexes alike. Young bird sooty brownish.

Hab. North Pacific Ocean, on the Asiatic side from the Arctic Ocean down to Japan and China, and occurs, it is said, as far south as Australia; on the American side from California to Alaska.

Like its allies this is strictly an oceanic bird, coming to land only during the nesting season. It nests on the Bonin Islands, Japan, in November, and eggs from there in the British Museum are dull white spotted and blotched at the larger end with red, and in length vary from 4·4 to 4·9, and in breadth from 2·75 to 3·05.

1185. BLACK-FOOTED ALBATROSS.

DIOMEDEA NIGRIPES.

Diomedea nigripes, Aud. Orn. Biogr. v. p. 327 (1839); id. B. of Am. 8vo ed. vii. p. 198; David and Oust. Ois. Chine, p. 517; Seebohm, B. Jap. Emp. p. 263; Salvin, Cat. B. Br. Mus. xxv. p. 445; Ridgway, p. 51.

Ad. (Japan). General colour sooty brown, the fore crown, neck, and under parts greyer; feathers at the base of the bill and a triangular spot behind and below the eye dull white; tail white at the base; bill dusky purplish brown, legs and feet black. Gape 4·6, wing 18·0, tail 5·5, tarsus 4·5 inch. The young bird has the crown and sides of the head whiter, the rump and upper tail-coverts white, or sooty brown and white intermixed.

Hab. North Pacific Ocean; the coasts of Japan and China; on the American side from the coast of California, where it is abundant, to Alaska.

The present species has been much confounded with *D. albatrus*, owing to the similarity of the young of that to the adult of the present species. I do not find any details respecting its nidification, but a single egg in the British Museum, obtained on Sulphur Island, Bonin group, Japan, on the 8th of June, is dull brownish white, without markings, and measures 4·2 by 2·5.

1186. BLACK-BROWED ALBATROSS.

DIOMEDEA MELANOPHRYS.

Diomedea melanophrys, Boie, in Temm. Pl. Col. 456 (1828); Gould, B. of Austral. vii. pl. 43; Salvin, Cat. B. Br. Mus. xxv. p. 447; Saunders, p. 753; Ridgway, p. 52.

Ad. Head, neck, entire under parts, rump, and upper tail-coverts white; a short slaty greyish black band before and behind the eye; back and scapulars slaty greyish brown, the wings dusky brown; tail slate-grey, the shafts white; bill yellowish horn, darker at the tip; legs and feet yellow. Gape 5·2, wing 20·0, tail 8·0, tarsus 3·05 inch.

Hab. Southern Ocean, straying occasionally to the North Atlantic; one was obtained in 80° 11′ N. lat. and 4° E. long. in June, 1878; one near Linton in Cambridgeshire in July, 1897; and in 1893 one was shot near Myggenaes in the Færoes, which for the past thirty to forty years had consorted with the Gannets on that island.

Like its allies it is essentially an oceanic bird, and only frequents the land during the breeding season. It breeds on many islands in the Southern Ocean, in colonies, the nest being a pile of earth and moss about four inches high, and a single egg is usually deposited, though occasionally 2 are found in the same nest. These are dull white, with a well-marked cap of rufous specks and blotches at the larger end, and measure about 4·1 by 2·57.

Diomedea exulans, Linn., is said to have been obtained on the coast of Norway, near Dieppe, Antwerp, and Chaumont; *Thalassogeron culminatus* (Gould) is said to have been procured in Norway; *Tachypetes aquilus* is stated to have been obtained on the Weser in 1792; *Phæton æthereus*, Linn., is said to have been obtained at Cradley, Lancashire, and to have been seen off Heligoland; a specimen of *Prion ariel*, Gould, in the Gould collection, is stated to have been obtained off Madeira; and *Daption capensis* (Linn.) has been procured off the Irish, English, and French coasts; but as all these records are more or less doubtful, and these species are strictly non-Holarctic, I have not deemed it necessary to include them.

ALCA, Linn., 1766.

1187. RAZORBILL.

ALCA TORDA.

Alca torda, Linn. Syst. Nat. i. p. 210 (1766); Naum. xii. p. 606, Taf. 336; Audubon, B. Am. vii. p. 247, pl. 466; Hewitson, ii. p. 468, pl cxxviii; Gould, B. of E. v. pl. 401; id. B. of Gt. Brit. v. pl. 47; Dresser, viii. p. 557, pl. 619; Ogilvie Grant, Cat. B. Br. Mus. xxvi. p. 565; Ridgway, p. 18; Saunders, p. 695; Lilford, vi. p. 79, pl. 36.

Pingouin macroptère, French; *Gazza-marina*, Ital.; *Tordalk*, German; *Alka*, *Klumba*, Icel.; *Alk*, Dutch; *Almindelig Alk*, Dan.; *Brednæbbet Alke*, Norweg.; *Tordmule*, Swed.; *Ruokki*, Finn.

♂ *ad.* (Greenland). Upper parts, wings, and tail glossy black; sides of head and throat brownish black; a white line from the ridge of the upper mandible on each side to the eye; short secondaries tipped with white; under parts white; bill black with a curved vertical white line on each side; legs and iris black. Gape 2·0, wing 8·1, tail 3·4, tarsus 1·35 inch. Sexes alike. In winter the throat and sides of the head and neck are white, and the upper parts duller and browner. The young bird resembles the adult in winter, but has the bill shorter, weaker, and less elevated.

Hab. The North Atlantic, not further than about 73° N., south to the Mediterranean; the Azores and the Canaries; on the American coasts to southern New England.

The Razorbill is essentially a sea-bird, and on the water swims and dives with the greatest ease, and its flight is direct and rapid. Its food consists of small fish, which it obtains by diving. It breeds on the ledges of cliffs close to the sea, almost always in societies, frequently in countless numbers, generally in company with one or other of the species of Guillemot, depositing in May, on the bare ground, a single egg, which is pyriform in shape, rather elongated, in ground-colour buffy stone or buffy white, sometimes with a faint greenish tinge, marked with purplish grey shell-markings and brownish black or black surface spots and blotches, which are more numerous at the larger end, and in size measures about 3·28 by 2·0. When held against the light the inner membrane of the empty egg is green.

1188. Great Auk.

ALCA IMPENNIS.

Alca impennis, Linn. Syst. Nat. i. p. 210 (1766); Naum. xii. p. 630, Taf. 337; Hewitson, ii. p. 469, pl. cxxix.; Gould, B. of E. v. pl. 400; id. B. of Gt. Brit. v. pl. 46; Dresser, viii. p. 563, pl. 620; (Ogilvie Grant), Cat. B. Br. Mus. xxvi. p. 563; (Ridgway), p. 19; Saunders, p. 697; Lilford, vi. p. 81, pl. 37.

Geir-fugl, Icel.

Being undoubtedly an extinct species, the Great Auk is scarcely entitled to a place in the present work. It used formerly to inhabit the North Atlantic Ocean, south of the Arctic Circle.

1189. The Guillemot.

ALCA TROILE.

Alca troile (Linn.), Syst. Nat. i. p. 220 (1766); (Hewitson), ii. p. 455, pl. cxxiv.; (Gould), B. of E. v. pl. 396; id. B. of Gt. Brit. v. pl. 48; Dresser, viii. p. 567, pl. 621; Seebohm, B. Jap. Emp. p. 273; (Ogilvie Grant), Cat. B. Br. Mus. xxvi. p. 573; (Saunders), p. 699; (Lilford), vi. p. 83, pl. 38; *Uria lomvia*, Keys. and Blas. Wirbelth. p. 238 (1840, nec. Pall.); Naum. xii. p. 508, Taf. 331; *U. ringvia*, Brünn. Orn. Bor. p. 28 (1764); *U. californica* (Bryant), P. Bost. Soc. viii. p. 142, figs. 3, 5 (1861); Ridgway, p. 18; Tacz. F. O. Sib. O. p. 1219.

Guillemot troile, French; *Lumme*, German; *Zeekoet*, Dutch; *Lángnefia*, *Langvia*, Icel.; *Langnæbet Teiste*, Dan.; *Spidsalke*, Norweg.; *Sillgrissla*, Swed.

Ad. (Yorkshire). Head, neck, upper parts, wings, and tail dark brown, the back tinged with slate; secondaries tipped with white; under parts below the neck white, the flanks streaked with dusky brown; bill black; legs and feet blackish olivaceous, the webs less black; iris brown. Gape 2·9, wing 7·7, tail 2·05, tarsus 1·05 inch. Sexes alike. In winter the upper parts are darker, the throat and sides of the head white, in places slightly mottled with brown, with a dark streak behind the eye through the white on the side of the head. The ringed variety, *U. ringvia*, differs only in having a narrow ring round the eye, and a streak passing from the eye along the side of the head, white.

Hab. The North Atlantic Ocean, North Sea, and southern Baltic; in winter south on the American side to New England, and on the European side down to about 30°; the North Pacific Ocean south to Japan and Southern California.

Like the Razorbill it is a marine species, keeping in vast companies, obtaining its food chiefly by diving, and like it breeds socially on the ledges of sea cliffs, generally those overhanging the sea, the egg, for only 1 is deposited, being placed on the ground, no nest being made. The eggs vary greatly, the ground-colour from white to deep blue or greenish blue, and the markings, which are sometimes mere spots, and at others contorted and fantastic lines, from reddish brown to dark brown and blackish, and in size they vary from 3·5 by 1·88 to 3·5 by 2·5.

1190. BRÜNNICH'S GUILLEMOT.

ALCA LOMVIA.

Alca lomvia (Pall.), Zoogr. Ross. As. ii. p. 345 (1811); Ridgway, p. 18; (Ogilvie Grant), Cat. B. Br. Mus. xxvi. p. 577; *A. bruennichi* (Sabine), Trans. Linn. Soc. xii. p. 538 (1817); (Hewitson), ii. p. 460, pl. cxxv.; (Gould), B. of E. v. pl. 398; Dresser, viii. p. 575, pl. 622; (Saunders), p. 701; (Lilford), vi. p. 87, pls. 39, 40; *A. arra* (Pall.), Zoogr. Ross. As. ii. p. 347 (1811); (Naum.) xii. p. 535, Taf. 333; (Tacz.) F. O. Sib. O. p. 1217.

Dickschnabel-Lumme, German; *Groote Zeekoet*, Dutch; *Stutnefia*, Icel.; *Brünnichs Teiste*, Dan.; *Lomvi*, Norweg.; *Brünnichs-Grisla*, Swed.

♂ *ad.* (Greenland). Crown, nape, and upper parts glossy black, the head and neck with a faint greenish gloss; wings and tail black, the secondaries tipped with white; chin, throat, and sides of head brownish black; under parts white; bill black, stout, the ridge of the upper mandible yellowish white; legs and feet plumbeous black, the upper parts of the toes and tarsus tinged with deep yellowish olive; iris dark brown. Gape 2·25, wing 8·5, tail 2·2, tarsus 1·5 inch. Sexes alike. In winter the upper parts are duller and the chin and throat white.

Hab. Arctic Ocean and North Atlantic, occasionally visiting the coasts of Norway, and of rare and accidental occurrence on the coasts of the British Islands, Denmark, Germany, and Holland; North Pacific as far south as Japan.

In habits and nidification this species does not differ from *U. troile*, and its eggs are similar, but as a rule somewhat blunter at the small end, and rather more brightly coloured.

MERGULUS, Vieillot, 1816.

1191. LITTLE AUK.

MERGULUS ALLE.

Mergulus alle (Linn.), Syst. Nat. i. p. 211 (1766); (Naum.), xii. p. 552, Taf. 334; (Hewitson), ii. p. 465, pl. cxxvii. fig. 1; (Gould), B. of E. v. pl. 402; id. B. of Gt. Brit. v. pl. 50; Dresser, viii. p. 591, pl. 624; (Ogilvie Grant), Cat. B. Br. Mus. xxvi. p. 569; (Ridgway), p. 19; Saunders, p. 705; Lilford, vi. p. 94, pl. 42.

Guillemot nain, French; *Krabbentaucher*, German; *Kleine Alk*, Dutch; *Haftirdill, Halkíon*, Icel.; *Lille Krabbedykker*, Dan.; *Alkekonge*, Norweg.; *Alkekung*, Swed.; *Jääkyyhkynen*, Finn.

Ad. (Greenland). Head and neck sooty black with a brownish tinge; upper parts of body and wing-coverts black glossed with purplish blue, the scapulars margined with white; wings and tail black, the short secondaries tipped with white; under parts white, the flanks striped with black; bill plumbeous black; legs dark livid flesh-colour; iris dark brown. Gape 0·9, wing 4·8, tail 1·4, tarsus 0·82 inch. Sexes alike. In winter the entire throat and sides of the neck are white, and the nape slightly marked with white.

Hab. The Arctic Ocean north to Franz Josef's Land, east to Novaya Zemlya, west to Baffin's Bay, ranging south after the nesting season to the coasts of Great Britain, Scandinavia, the Baltic up to the Gulf of Bothnia, and the North Sea, and Atlantic south to the Canaries and Azores.

In habits it is essentially a sea-bird. It feeds, usually in large flocks, on small crustacea and probably also on small fish. At its breeding places, which are often near the top of lofty cliffs, it is said to be very noisy, continually uttering its note, *trrr, trrr, tet, tet, tet, trrr.* It breeds in rocky places, depositing a single egg between the stones, or in clefts of the rocks. The eggs are pale greenish blue, sometimes almost white, occasionally dotted and spotted, chiefly at the larger end, with pale red, and measure about 1·88 by 1·31.

URIA, Brisson, 1760.

1192. BLACK GUILLEMOT.

URIA GRYLLE.

Uria grylle, Linn. Syst. Nat. i. p. 220 (1766); (Naum.), xii. p. 461, Taf. 330; Hewitson, ii. p. 462, pl. cxxvi.; Gould, B. of E. v. pl. 399; id. B. of Gt. Brit. v. pl. 49; Dresser, viii. p. 581, pl. 623; Ogilvie Grant, Cat. B. Br. Mus. xxvi. p. 580; (Ridgway), p. 16; Saunders, p. 703; Lilford, vi. p. 91, pl. 41.

Guillemot grylle, French: *Gryll-Teiste*, German; *Theista*, Icel.; *Almindelig Teiste*, Dan.; *Teiste, Per-drikker*, Norweg.; *Tobisgrisla*, Swed.; *Riskilä*, Finn.

♂ *ad.* (Greenland). General plumage deep black, the upper parts with a greenish gloss, the under parts tinged with brownish; central and larger wing-coverts white, but black on the concealed bases of the feathers, forming a large white alar patch; bill black; legs and feet rich vermilion or coral-red; iris dark brown. Culmen 1·4, wing 6·4, tail 2·2, tarsus 1·15 inch. Sexes alike. In winter the crown is white marked with black; back and rump black, the feathers margined with white, the latter nearly all white; wings and tail as in summer; rest of plumage white.

Hab. North Atlantic east to the White Sea; the Baltic and coasts of Scandinavia, Germany, and Northern France; breeds on the coasts of Britain; on the American coasts, from S. Greenland and Labrador, south to New Jersey in winter.

Like *A. troile* it is essentially a sea bird, usually found far out at sea, except during the breeding season, but it lives in pairs and does not breed in societies. It swims with ease, dives like a flash, and its flight is swift and direct. Its food consists of crustacea and small fish, which it obtains chiefly by diving. Unlike *A. troile* it does not deposit its eggs on the bare ledges of cliffs, but in a cleft in the rock, or under a boulder, sometimes near the water's edge, and at others at a considerable altitude, and makes no nest. Its eggs, 2 to 3 in number, are usually deposited late in May or in June, and are white or greenish white with purplish grey shell-markings, and blackish brown surface spots and blotches, some being but scantily, others very richly marked. In size they measure about 2·41 by 1·62.

1193. MANDT'S GUILLEMOT.

URIA MANDTI.

Uria mandti, Licht. in Mandt. Observ. &c. Diss. Inaug. p. 30 (1822); Dresser, viii. p. 587; (Tacz.), F. O. Sib. O. p. 1221; Ogilvie Grant, Cat. B. Br. Mus. xxvi. p. 584; (Ridgway), p. 16.

♂ *ad.* (Spitsbergen). Differs from *U. grylle* in having the bill slightly smaller, and the feathers constituting the white alar patch white to the base. Culmen 1·5, wing 6·4, tail 2·0, tarsus 1·1 inch. In winter the upper parts are whiter than in *U. grylle*.

Hab. Coasts of the circumpolar seas, to Franz Josef's Land, Spitsbergen, Novaya Zemlya, North Greenland, and Arctic America, south to Labrador and Hudson's Bay; in the North

Pacific, Kamchatka, the Commander Islands, and Saghalien, and the northern coasts of E. Siberia.

In habits and nidification this species does not differ from *U. grylle,* and its eggs resemble those of that species.

1194. PIGEON-GUILLEMOT.

URIA COLUMBA.

Uria columba (Pall.), Zoogr. Ross. As. ii. p. 348 (1811); (Tacz.), F. O. Sib. O. p. 1222; (Seebohm), B. Jap. Emp. p. 275 (part); Ridgway, p. 17; Ogilvie Grant, Cat. B. Br. Mus. xxvi. p. 586.

♂ *ad.* (Bering Island). Differs from *U. grylle* in having the bill stouter and more obtuse at the tip, the plumage tinged with grey, the under wing-coverts smoky brown, the white alar patch divided on the outer half by a black V-shaped bar, and the basal part of the quills greyish on the inner web, tail composed of 14, not 12 feathers. Culmen 1·2, wing 7·2, tail 2·0, tarsus 1·3 inch.

Hab. North Pacific, on the Asiatic side on the coasts of Kamchatka, the Commander Islands, the seas of Ochotsk and Japan, and the coasts of Japan and Corea; on the American side from the Aleutian Islands to Southern California.

In habits and nidification it does not differ from *U. grylle,* but its eggs are as a rule rather larger and more boldly marked.

1195. SOOTY GUILLEMOT.

URIA CARBO.

Uria carbo (Pall.), Zoogr. Ross. As. ii. p. 350, pl. lxxix. (1811); Gould. B. of As. vii. pl. 71; Schrenck, Reis. Amurl. i. p. 496, pl. xvi. fig. 1 (egg); (Seebohm), B. Jap. Emp. p. 274; (Tacz.), F. O. Sib. O. p. 1224; Ogilvie Grant, Cat. B. Br. Mus. xxvi. p. 589; (Ridgway), p. 17.

♂ *ad.* (Japan). Differs from *U. columba* in having a more robust and longer bill; general colour slaty black, paler below, tinged with brown on the shoulders, under wing-coverts, and axillaries; orbital region white, white alar patch large; feathers on the chin and throat and above the nasal opening whitish; tail composed of 14 feathers. Culmen 2·0, wing 7·7, tail 2·05, tarsus 1·5 inch.

Hab. North Pacific from the Commander Islands, the Sea of Ochotsk, Kamchatka, the Kurile Islands, and coasts of Japan and Corea.

In habits and nidification it does not differ from *U. grylle*, but its eggs are a trifle larger and more boldly marked.

1196. SUBSP. URIA SNOWI.

Uria snowi (Stejn.), Auk, xiv. p. 201 (1897); Ogilvie Grant, Cat. B. Br. Mus. xxvi. p. 588; (Oates), Cat. Birds' Eggs, B. Mus. i. p. 171, pl. xii. fig. 6.

♂ *ad.* (Kuriles). Differs from *U. columba* in having only two or three narrow white bars on the wing composed of white tips to the wing-coverts; soft parts as in *U. columba*. Culmen 1·6, wing 7·4, tail 1·95, tarsus 1·3 inch.

Hab. North Pacific from Southern Kamchatka to the Kurile Islands and Japan.

In habits and nidification it does not differ from *U. grylle*, and its eggs resemble those of that species.

BRACHYRHAMPHUS, Brandt, 1837.

1197. PARTRIDGE AUK.

BRACHYRHAMPHUS PERDIX.

Brachyrhamphus perdix (Pall.), Zoogr. Ross. As. ii. p. 351, pl. lxxx. (1811); Tacz. F. O. Sib. O. p. 1211; Ogilvie Grant, Cat. B. Br. Mus. xxvi. p. 592; Ridgway, p. 15; *Alca marmorata* (nec. Gmel.), Seebohm, B. Jap. Emp. p. 278.

♂ *ad.* (Kamchatka). Head, neck, and upper parts brown mottled with dull tawny buff and buffy white; wings and tail blackish, the latter slightly tipped with greyish buff; chin and upper throat white very sparingly dotted with blackish; rest of under parts white mottled with blackish brown; bill plumbeous black; legs and feet pale yellow, the webs blackish; iris dark brown. Bill from feathers on forehead to tip 0·75, wing 5·8, tail 1·5, tarsus 0·7 inch. Sexes alike.

In winter the crown, neck, and sides of lower neck are deep slate, the wings darker, the middle tail-feathers blackish, the rest white; chin, throat, a collar across the nape, and under parts white.

Hab. Asiatic coast of North Pacific from Kamchatka to the Sea of Ochotsk, Kuriles and Japan.

Occurs off the islands and coasts of the North Pacific, usually in small flocks, and is essentially a sea-bird, swimming and diving with ease like the Little Auk. In holes in the ground it lays eggs pale yellowish white, with faint slaty and reddish brown dots, chiefly collected round the larger end, and measure about 2·46 by 1·66.

1198. SHORT-BILLED AUK.

BRACHYRHAMPHUS BREVIROSTRIS.

Brachyrhamphus brevirostris (Vigors), Zool. Jour. iv. p. 357 (1828); (Seebohm), B. Jap. Emp. p. 279; Ogilvie Grant, Cat. B. Br. Mus. xvi. p. 593; *B. kittlitzi*, Brandt, Bull. Acad. St. Petersb. ii. p. 346 (1837); Tacz. F. O. Sib. O. p. 1213; Ridgway, p. 15; Turner, Nat. Hist. Alaska, p. 120, pl. ii.

♂ *ad.* (Kuriles). Differs from *B. perdix* in being much smaller, with a much smaller bill; upper parts darker and more distinctly mottled with buff; chin and throat white closely mottled with black; rest of under parts white less closely spotted and mottled with black; bill black; legs and feet pale blue, darker posteriorly; claws and iris black. Bill from feathers to tip 0·45, wing 5·5, tail 1·1, tarsus 0·7 inch. Sexes alike.

Hab. North Pacific from Kamchatka, the Aleutian Islands, and the Sea of Ochotsk, to Japan; Unalaska, south to the coast of Mexico.

In general habits it does not differ from *B. perdix.* Its eggs do not appear to be known, but doubtless resemble those of *B. perdix* except in being smaller.

SYNTHLIBORHAMPHUS, Brandt, 1837.

1199. ANCIENT AUK.

SYNTHLIBORHAMPHUS ANTIQUUS.

Synthliborhamphus antiquus (Gmel.), Syst. Nat. i. p. 554 (1788); Tacz. F. O. Sib. O. p. 1215; Ridgway, p. 14; Ogilvie Grant, Cat. B. Br. Mus. xxvi. p. 596; (Seebohm), B. Jap. Emp. p. 276.

Umi-suzumi, Jap.

♂ *ad.* (Alaska). Crown, nape, hind neck, sides of head, chin, throat, sides of lower neck, and flanks black, the nape, sides of lower hind neck and fore back more or less strongly marked with white; upper parts dark slate-grey; wings and tail black washed with slate-grey; under parts, including the sides of the neck, white; bill whitish grey, brownish black along the culmen and towards the base; legs and feet bluish white, the joints brownish black; basal part of webs sooty black; iris dark brown. Culmen from base of feathers 0·55, wing 5·3, tail 1·9, tarsus 1·05. Sexes alike. In winter the fore neck and throat are white, the chin dark grey, and the stripes on the sides of the head absent.

Hab. North Pacific from Kamchatka to the Commanders, Aleutians, Kuriles, and Japan.

In habits not differing from *Brachyrhamphus.* It breeds in holes in the ground, depositing in June 2 eggs, which are pale yellowish white faintly dotted with pale slate and reddish brown, and measure about 2·41 by 1·47.

1200. JAPANESE AUK.

SYNTHLIBORHAMPHUS WUMIZUSUMÈ.

Synthliborhamphus wumizusumè (Temm.), Pl. Col. v. pl. 121 (1835); (Seebohm), B. Jap. Emp. p. 277; Ogilvie Grant, Cat. B. Br. Mus. xxvi. p. 598; Ridgway, p. 14; Tacz. F. O. Sib. O. p. 1215; *B. temmincki*, G. R. Gray, Gen. of B. iii. p. 644; Elliot, B. N. Am ii. pl. lxxi.

Umi-suzumi, Jap.

♂ *ad.* (Japan). Middle of crown and nape, lower hind neck, and a large frontal tuft, wings, and tail black; chin, upper throat, and sides of head blackish slate-grey; upper parts slate-grey; sides of crown and of nape, and under parts white; bill yellowish horn, blackish along the ridge of the culmen and towards the base; legs and feet as in *S. antiquus*; iris dark brown. Gape 1·25, wing 4·75, tail 1·4, tarsus 0·9.

Hab. Coasts of Japan.

In habits this species does not differ from its allies; its eggs are as yet unknown.

SIMORHYNCHUS, Merrem, 1819.

1201. CRESTED AUK.

SIMORHYNCHUS CRISTATELLUS.

Simorhynchus cristatellus (Pall.), Spic. Zool. fasc. 5, p. 20, pls. 3 and 5, figs. 7-9 (1769); (Schrenck), Reis. Amur. L. i. p. 500, pl. xvi. figs. 4, 5 (1859); Ogilvie Grant, Cat. B. Br. Mus. xxvi. p. 602; (Seebohm), B. Jap. Emp. p. 285; Ridgway, p. 13; *S. tetraculus* (Pall.), op. cit. p. 23, pls. iv. v. figs. 10–12 (1769).

Eturop-umi-suzumi, Jap.

♂ *ad.* (Bering Island). Upper parts blackish tinged with slaty brown; under parts dull slate-grey; wings and tail blackish; on the forehead a large black recurved crest, and a white streak through and behind the eye where these feathers are much elongated; basal portion of both mandibles bright orange, extremity light bluish horn; inside of mouth flesh-colour; legs and feet bluish slate, the webs darker; iris nearly white. Culmen from feathers 0·5, wing 5·6, tail 1·65, tarsus 1·1 inch.

Hab. North Pacific from Kamchatka to the Commander and Kurile Islands, and Japan; Alaska.

In habits not differing from its allies. It breeds in deep crevices in and under the rocks, depositing in June chalky white eggs, which vary in size from 2·06 by 1·50 to 2·31 by 1·61.

1202. WHISKERED AUK.

SIMORHYNCHUS PYGMÆUS.

Simorhynchus pygmæus (Gmel.), Syst. Nat. i. p. 555 (1788); (Seebohm), B. Jap. Emp. p. 286; Ogilvie Grant, Cat. B. Br. Mus. xxvi. p. 603; Ridgway, p. 13; (Tacz.), F. O. Sib. O. p. 1235.

♂ *ad.* (Kuriles). Upper parts, wings, and tail black; rump and upper tail-coverts dark slate; lower abdomen white, the rest of the under parts sooty greyish black, becoming black on the upper throat and chin; a patch in front of the eye, and long stripes of elongated feathers from the base of the gape and from behind the eye white; a long recurved white crest above the eye, and a long black one on the forehead; beak vermilion, the tip bluish; legs and feet light bluish grey, the joints brownish violet; iris white. Culmen from feathers 1·4, wing 4·6, tail 1·3, tarsus 1·0 inch Sexes alike. In winter the plumage scarcely differs.

Hab. North Pacific from Kamchatka the Commander and Kurile Islands to Northern Japan; Alaska.

In general habits it does not differ from its allies, and I do not find any description of its nidification, but its egg is pure white, rather dull in grain, and measures 1·78 by 1·26.

1203. LEAST AUK.

SIMORHYNCHUS PUSILLUS.

Simorhynchus pusillus (Pall.), Zoogr. Ross. As. ii. p. 373, pl. xc. (1811); (Elliot), B. N. Am. ii. pl. lxviii.; (Tacz.), F. O. Sib. O. p. 1229; Ogilvie Grant, Cat. B. Br. Mus. xxvi. p. 605; Ridgway, p. 13; (Seebohm), B. Jap. Emp. p. 287; *Phaleris microceros*, Brandt, Bull. Acad. St. Petersb. ii. p. 347 (1837).

♂ *ad.* (St. Paul's, Alaska). Upper parts, wings, tail, chin, and a narrow band crossing the neck black; rest of under parts white, the flanks marked with blackish; forehead finely striped with pointed white feathers, and two or three white lines behind the eye; bill dark reddish on the terminal half, basal half and tubercle dusky; legs and feet light whitish cobalt-blue, the joints darker; webs blackish; iris white. Culmen 0·55, wing 3·9, tail 1·9, tarsus 0·8 inch. Sexes alike. In winter the tubercle at the base of the bill is absent, and the chin and upper throat are dark smoke-grey.

Hab. North Pacific and the Arctic Ocean south to Japan; Kamchatka, the Commander and Kurile Islands; Alaska.

In habits it does not appreciably differ from its allies. It breeds in crevices of rocks or under huge boulders, in June, laying a single dull white egg, very faintly marked with pale reddish brown at the larger end, which measures 1·62 by 1·07.

1204. PARROQUET AUK.

SIMORHYNCHUS PSITTACULUS.

Simorhynchus psittaculus (Pall.), Spicel. Zool. fasc. v. pls. ii. and v. figs. 4–6; (Tacz.), F. O. Sib. O. p. 1227; (Elliot), B. N. Am. ii. pl. lxx.; (Seebohm), B. Jap. Emp. p. 284; (Ogilvie Grant), Cat. B. Br. Mus. xxvi. p. 607; (Ridgway), p. 12.

♂ *ad.* (Kuriles). Head, neck to upper breast, upper parts, wings, tail, and flanks deep smoky black, rather browner on the neck; rest of under parts white; a band of narrow elongate white feathers from behind the eye across the ear-coverts; bill salmon-red; nasal shield darker, greyish brown; soft part along the base of the upper tomia fleshy white; feet bluish white tinged with yellow, on the joints a well-defined dusky spot; webs blackish, along the toes bluish white; sides of tarsus and toes black; iris white. Gape 1·0, wing 6·1, tail 1·85, tarsus 1·25 inch.

Hab. North Pacific from the Chukchi Peninsula to the Kuriles, but not on the coasts of Eastern Siberia, though it occurs on those of Kamchatka; Commander Isles and Alaska.

In habits it is said to resemble its allies. Its note is a clear whistle like that of *Uria grylle* and *U. columba.* It lays in June, in the crannies of almost inaccessible cliffs, its single egg, which is dull chalky white without any markings. A single egg in my collection measures 1·62 by 1·17.

CERORHYNCHA, Bp., 1826.

1205. HORNBILLED PUFFIN.

CERORHYNCHA MONOCERATA.

Cerorhyncha monocerata (Pall.), Zoogr. Ross. As. ii. p. 362 (1811); (Tacz.), F. O. Sib. O. p. 1241; (Seebohm), B. Jap. Emp. p. 283; Ogilvie Grant, Cat. B. Br. Mus. xxvi. p. 609; Ridgway, p. 12.

♂ *ad.* (Japan). Upper parts generally, wings, and tail black; sides of head, chin, neck, and upper breast, flanks, and under wing-coverts brownish smoke-grey; rest of under parts white from the gape, and also from behind the eye a line of long narrow white feathers; bill orange-yellow, the cutting edges of the mandibles dusky; ridge of culmen and anterior and posterior edges of horn black, corner of mouth white; legs and feet whitish yellow, dusky at the joints, the back of metatarsi and soles blackish. Gape 1·76, wing 7·4, tail 2·0, tarsus 1·25 inch. Sexes alike.

Hab. North Pacific from Kamchatka to Japan; the Commander Isles, the coasts of Russian Manchuria to Sidemi; Alaska to Southern California.

In habits it is said to resemble the Puffins. I do not find any description of its nidification, but 2 eggs in my collection are dull chalky white, and measure 2·72 by 1·77 and 2·56 by 1·92 respectively.

LUNDA, Pall., 1811.

1206. TUFTED PUFFIN.

LUNDA CIRRHATA.

Lunda cirrhata (Pall.), Spic. Zool. fasc. v. p. 7, pls. 1 and 5, figs. 1–3 (1769); id. Zoogr. Ross. As. ii. p. 363, pl. lxxxii.; Tacz. F. O. Sib. O. p. 1243; (Seebohm), B. Jap. Emp. p. 281; Ogilvie Grant, Cat. B. Br. Mus. xxvi. p. 612; Ridgway, p. 10.

Toporak, Russ.

♂ *ad.* (Bering Island). General colour deep black, the under parts below the breast duller and rather paler; base of bill and anterior half of face white; above the eye a long bunch of silky straw-coloured feathers; terminal portion of bill deep orange-red, the basal part light olive-green, almost apple-green along the ridge of the culmen; angle of mouth and a narrow strip of skin between the bill and feathering of the face, and ring round the eye vermilion; legs and feet bright red; iris white. Gape 1·85, wing 7·8, tail 2·4, tarsus 1·25 inch. Sexes alike. In winter the sides of the head are dusky, and the straw-yellow tufts above the eyes are absent.

Hab. North Pacific, from Kamchatka; the Commander and Kurile Isles; the Sea of Ochotsk to Japan; on the American side from Alaska to Southern California; of accidental occurrence in Maine, U.S., and off Greenland.

In habits it closely resembles our Puffin, and its note is an angry *crrrr*. It nests in crannies in the rocks, and its egg is dull chalky white, sometimes finely dotted with reddish brown, and measures about 2·86 by 1·92.

FRATERCULA, Briss., 1760.

1207. PUFFIN.

FRATERCULA ARCTICA.

Fratercula arctica (Linn.), Syst. Nat. i. p. 211 (1766); (Naum.), xii. p. 577, Taf. 335; (Hewitson), ii. p. 466, pl. cxxvii. fig. 2; Gould, B. of Gt. Brit. v. p. 51; Dresser, viii. p. 599, pl. 625; Ogilvie Grant, Cat. B. Br. Mus. xxvi. p. 616; Saunders, p. 707; Ridgway, p. 11; Lilford, vi. p. 96, pl. 43; *Mormon fratercula*, Temm. Man. d'Orn. p. 614 (1815); Gould, B. of E. v. pl. 403; *F. glacialis*, Steph. in Shaw's Gen. Zool. xiii. part 1, p. 40, pl. iv. fig. 2 (1826).

Macareux, French; *Papagaio do mar*, Portug.; *Frailecillo*, Span.; *Polcinella di mare*, Ital.; *Arktischer Lund*, German; *Seepapagei*, Dutch; *Lundi*, Icel.; *Sö-papagöie*, Dan.; *Lundefugl*, Norweg.; *Lunnefogel*, Swed.

♂ *ad.* (Greenland). Crown brownish black; sides of head to above the eye, chin, and upper throat ashy grey; neck collar narrowing to a thin band in front, back and upper parts, wings and tail deep black, the upper parts glossed with purple; under parts white; bill in spring and summer livid blue, the upper ridge and those crossing the bill orange-red, the fleshy part round the gape orange, the ridge at the base tinged with green; legs bright orange; iris grey; a fleshy patch above and below the eye lead-blue. Gape 1·55, height of bill at base 1·5, wing 6·7, tail 2·0, tarsus 1·15 inch.

Hab. Both sides of the North Atlantic, north to Greenland, east to Novaya Zemlya, breeding as far south as the north of France; in winter ranging south to the Canaries.

Essentially an ocean bird the Puffin is only seen near the land during the breeding season. It swims well and buoyantly, and flies swiftly. It dives with ease, feeding on small fish and mollusca, which it obtains by diving. It breeds in May, depositing in holes in the ground or crevices in the rocks, a single egg, which is dull white with a rough surface, sometimes marked with pale brown, and measures about 2·50 by 1·61.

1208. HORNED PUFFIN.

FRATERCULA CORNICULATA.

Fratercula corniculata (Naum.), Isis, 1821, p. 782, Taf. vii. figs. 3, 4; Seebohm, B. Jap. Emp. p. 280; Tacz. F. O. Sib. O. p. 1248; Ogilvie Grant, Cat. B. Br. Mus. xxvi. p. 620; Ridgway, p. 11.

Etopirika, Jap.

♂ *ad.* (Kuriles). Differs from *F. arctica* in having the sides of the head white, a narrow grey stripe behind the eye, the forehead and crown blackish grey, the black collar on the neck extended up to the chin; a blackish elongated horn on the upper eyelid; tip of bill to between the 2nd and 3rd groove red, basal part pale chrome-yellow; swollen angle of gape and inside of mouth orange; legs orange-red; iris brownish grey; naked ring round the eye deep orange. Gape 1·5, height of bill at base 1·8, wing 7·3, tail 2·6, tarsus 1·2. Sexes alike. In winter the sides of the head are ashy grey, and the superciliary horns and basal shields on the bill fall off.

Hab. North Pacific, north to 71° in the Arctic Ocean; Kamchatka, the Commander and Kurile Islands, the Sea of Ochotsk, Alaska, and British Columbia.

In habits and nidification it does not differ from *F. arctica*, and its eggs are undistinguishable from those of that species. In both *Lunda* and *Fratercula* the young birds resemble the adult in winter dress, but have a smaller bill, and the young in down are dark sooty brown with white or whitish bellies.

COLYMBUS, Linn., 1766.

1209. Red-throated Diver.

COLYMBUS SEPTENTRIONALIS.

Colymbus septentrionalis, Linn. Syst. Nat. i. p. 220 (1766); Naum. xii. p. 434, Taf. 329; Hewitson, ii. p. 453, pl. cxxiii. fig. 1; Gould, B. of E. v. pl. 395; id. B. of Gt. Brit. v. pl. 45; Dresser, viii. p. 621, pl. 628; David and Oust. Ois. Chine, p. 512; Ogilvie Grant, Cat. B. Br. Mus. xxvi. p. 487; Saunders, p. 715; Lilford, vi. p. 105, pl. 47; *C. lumme*, Brünn. Orn. Bor. p. 39 (1764); Tacz. F. O. Sib. O. p. 1264; Ridgway, p. 8.

Plongeon cat-marin, French; *Mergulhão*, Portug.; *Cardellot* Span.; *Strolaga minore*, Ital.; *Nordsee-taucher*, German; *Roodhalzige Zeeduiker*, Dutch; *Lómr*, Icel.; *Nordisk Lom*, Dan.; *Smaalom*, Norweg.; *Smålom*, Swed.; *Gakkur*, Lapp.; *Kaakkuri*, Finn.; *Abi*, Jap.

♂ *ad.* (Greenland). Fore-crown, deep blue-grey streaked with black; hind crown, neck, and fore back black with white margins; upper parts brownish black, finely spotted with white; wings and tail blackish brown, the latter tipped with dirty white; sides of head, neck, and throat clear blue-grey; on the throat a large triangular patch of rusty red; flanks blackish brown; rest of under parts white; bill black; legs blackish brown, tinged with green on the outside, the middle of the webs dull fleshy yellow; iris dark brown. Culmen 2·5, wing 11·0, tail 2·1, tarsus 2·75 inch. Sexes alike. In winter the throat and sides of face are white.

Hab. Northern portions of the Old and New Worlds; in Europe north to Iceland and Greenland, south in winter to the Mediterranean, Black Sea, and to Lower Egypt; in Asia north to Kamchatka, south in winter to Japan and China; in America, in winter, nearly across the United States.

This species flies swiftly, but is less frequently seen on the wing than on the water; there its movements are graceful and easy, and it dives with ease, remaining for some time below the surface. Its note is a loud weird shriek, like that of a drowning person. It nests on the borders of fresh-water lakes, the nest being merely a small collection of rushes or grass close to the water, and its eggs, 2 in number, are usually deposited early in June, and are olivaceous brown or olivaceous, spotted and blotched with black, but sometimes plain unspotted olivaceous brown; they measure about 2·85 by 1·79.

1210. BLACK-THROATED DIVER.

COLYMBUS ARCTICUS.

Colymbus arcticus, Linn. Syst. Nat. i. p. 221 (1766); (Naum.), xii. p. 418, Taf. 328; Hewitson, ii. p. 451, pl. cxxiii. fig. 2; Gould, B. of E. v. pl. 394; id. B. of Gt. Brit. v. pl. 44; Temminck and Schlegel, Faun. Jap. Aves, p. 123; Dresser, viii. p. 615, pl. 627; Ogilvie Grant, Cat. B. Br. Mus. xxvi. p. 492; Tacz. F. O. Sib. O. p. 1262; Saunders, p. 713; Ridgway, p. 7; Lilford, vi. p. 104, pl. 46.

Plongeon à gorge noire, French; *Strolaga mezzana*, Ital.; *Polartaucher*, German; *Pareldniker*, Dutch; *Polar-lom*, Danish; *Stor-lom*, Norweg.; *Stor-lom*, Swed.; *Kuikka*, Finn.; *Gagara polosataya*, Russ.; *O-hamu*, Jap.

♂ *ad.* (Archangel.) Crown, nape, and hind neck ashy grey, darker on the forehead and brownish on the sides of the head; upper parts glossy black marked with white cross bars; wings and tail black, the former spotted with white; chin and throat black, tinged with purple, the sides of the throat striped with white, and a patch of white stripes on the upper throat; under parts white, the flanks black; bill bluish black, paler at the base; outer tarsus, hind and outer toes, and two marks across the webs blackish brown tinged with green, the rest of the legs and the webs reddish white. Culmen 2·6, wing 11·7, tail 2·5, tarsus 2·9 inch. Sexes alike. In winter the upper parts are dull blackish marked with brownish white; the chin, throat, and under parts white; the sides of the lower throat and breast striped with black.

Hab. The northern portions of Europe, Asia, and America, but not in Iceland, migrating south in winter, in Europe to the Mediterranean, Black Sea, and Caspian, in Asia to Japan, and in America to the Northern United States east of the Rockies.

In habits the present species closely resembles its allies, and like those its cry is loud and weird. It nests on the margins of lakes or on small islands, its nest being a scanty collection of herbage, and in May deposits 2 eggs, which resemble those of *C. septentrionalis*, but are darker and larger, measuring 3·22 by 2·10.

1211. GREAT NORTHERN DIVER.

COLYMBUS GLACIALIS.

Colymbus glacialis, Linn. Syst. Nat. i. p. 221 (1766); (Naum.) xii. 397, Taf. p. 327; Hewitson, ii. p. 449, pl. cxxii.; Gould, B. of E. v. pl. 393; id. B. of Gt. Brit. v. pl. 43; Dresser, viii. p. 609, pl. 626; Ogilvie Grant, Cat. B. Br. Mus. xxvi. p. 496; Saunders, p. 711; Lilford, vi. p. 97, pl. 44; *Colymbus immer*, Linn. Syst. Nat. i. p. 222 (1766); Ridgway, p. 7; *C. torquatus*, Keyserl. and Blas. Wirbelth. p. 916 (1840).

Plongeon imbrim, French; *Mergulhão*, Portug.; *Patoula, Ahulla*, Span.; *Strolaga maggiore*, Ital.; *Eisseetaucher, Imbergans*, German; *Ijsduiker*, Dutch; *Himbrimi*, Icel.; *Islom*, Dan., Norweg., and Swed.; *Morskaya-Gagára*, Russ.

♂ *ad.* (Maine, U.S.) Differs from *C. arcticus* in being larger, in having the whole head and neck glossed with steel-blue and purple; the upper parts black, glossed with steel-blue and purple and spotted with black; on the upper and lower throat a transverse band of white stripes; under parts white; the sides of the lower throat and upper breast striped with purplish black; flanks purplish black spotted with white, and a dark band across the crissum; bill blackish horn, the tip and edge of mandibles plumbeous; legs blackish, lighter on the inner side; iris rich reddish. Culmen 4·4, wing 15·8, tail 3·2, tarsus 3·6 inch. Sexes alike. In winter the upper parts are dark brown, the feathers margined with ashy grey, and the chin, throat, and under parts white, the longer under tail-coverts and a band across the vent brown.

Hab. Northern North America, Greenland, Iceland, and the Færoes, east to Novaya Zemlya; in winter ranging south to the Mediterranean, the Gulf of Mexico, and California; of regular occurrence in Scandinavia and Britain.

In habits it does not differ from its allies, but is as a rule rather more shy and wary. Its cry is very loud, wild, and weird, resembling that of a child being tortured. Its food consists chiefly of fish, which it captures by diving, and it is also said to devour small crabs. Its nest is a mass of herbage close to the water, usually on an island or the borders of an inland lake, and its eggs are dull brownish olivaceous, spotted and blotched with blackish brown, and measure about 2·49 by 2·26.

1212. White-billed Diver.

COLYMBUS ADAMSI.

Colymbus adamsi, G. R. Gray, P.Z.S. 1859, p. 167 ; Collett, Ibis, 1894, p. 269, pl. viii. ; Seebohm, B. Jap. Emp. p. 362 ; Tacz. F. O. Sib. O. p. 1259 ; Dresser, ix. p. 413, pl. 722 ; Ogilvie Grant, Cat. B. Br. Mus. xxvi. p. 500 ; Saunders, p. 711 ; Ridgway, p. 7 ; Lilford, vi. p. 102, pl. 45.

Bolchoi-Gagára, Russ. ; *Ovankets jouku,* Chukch.

♂ *ad.* (Russian America.) Differs from *C. glacialis* in having the white spots on the back and wings larger, the upper throat collar with fewer and larger stripes, and the bill long, straight, and whitish yellow. Culmen 4·3, gape 4·7, wing 15·25, tail 2·6, tarsus 3·5 inch.

Hab. North-western North America and Northern Asia, ranging west to Norway ; in winter occurring south to Japan and as a rare straggler in Britain.

In general habits this species does not differ from *C. glacialis*, and its eggs resemble those of that species.

PODICIPES, Lath., 1787.

1213. Great Crested Grebe.

PODICIPES CRISTATUS.

Podicipes cristatus (Linn.), Syst. Nat. i. p. 222 (1766) ; (Naum.), ix. p. 686, Taf. 242 ; Hewitson, ii. p. 441, pl. cxx. fig. 2 ; Gould, B. of E. v. pl. 388 ; id. B. of Gt. Brit. v. pl. 38 ; Dresser, viii. p. 629, pl. 629 ; David and Oust. Ois. Chine, p. 514 ; Ogilvie Grant, Cat. B. Br. Mus. xxvi. p. 544 ; Tacz. F. O. Sib. O. p. 1251 ; Blanf. F. Brit. Ind. Birds, iv. p. 473 ; Saunders, p. 717 ; Ridgway, p. 5 ; Lilford, vi. p. 109, pl. 48 ; *P. australis*, Gould, P.Z.S. 1844, p. 135 ; id. B. of Austral. vii. pl. 80.

Grêbe huppé, French; *Mergulhão de crista*, Portug.; *Somormujo*, Span.; *Svasso maggiore*, Ital.; *Gehaubter-Steissfuss*, German; *Fuut*, Dutch; *Toppet-Lappedykker*, Dan.; *Toplom*, Norweg.; *Skägg-Dopping*, Swed.; *Silkkikuikka*, Finn.; *Gagara-khokhlataïa*, Russ.

♂ *ad.* (Volga). Crown and occipital tufts greyish-greenish black; from the base of the upper mandible a reddish line passes over the eye to the white on the cheeks; chin and fore part of the face white; ruff light brownish red anteriorly; greyish black posteriorly; hind neck greyish black, the fore part white on the sides, tinged with buffy brown; upper parts greyish black with some brownish grey margins; anterior edge of wing, the short secondaries, and a few scapulars white; under parts silvery white, the flanks buffy brown; bill blackish brown, yellowish at the base and along the lower mandible; a bare space from the eye to the mouth dusky green; legs dusky green externally, greenish yellow internally; iris carmine-red. Culmen 2·1, wing 7·4, tarsus 2·5 inch. Female smaller and with the ruff and occipital tufts less developed.

Hab. Central and Southern Europe, north to Britain and Scandinavia; Africa, south to the Cape of Good Hope; Asia, north to Mongolia, east to Japan, and south to India; Australia, Tasmania, and New Zealand.

Essentially a water bird this Grebe is an expert swimmer and diver, but clumsy on land. When alarmed it seeks safety by diving, but on the wing it is tolerably swift. Its food consists of small fish, frogs, insects, and larvæ, which it captures chiefly under water. Its note is a loud, deep *keck, keck, keck,* and its pairing cry a loud *kreworr, kreworr.* Its nest is a heap of floating aquatic herbage, and its 3 or 4 eggs, which are usually deposited in May, are dull chalky white with a yellowish green tinge, and measure about 2·20 by 1·44.

1214. RED-NECKED GREBE.

PODICIPES GRISEIGENA.

Podicipes griseigena (Bodd.), Tabl. Pl. Enl. p. 55 (1783); Dresser, viii. p. 639, pl. 630; Ogilvie Grant, Cat. B. Br. Mus. xxvi. p. 539; Saunders, p. 719; Ridgway, p. 5; Lilford, vi. p. 114, pl. 49; *P. rubricollis*, Gmel. Syst. Nat. i. p. 592 (1788); Gould, B. of E. v. pl. 389; id. B. of Gt. Brit. v. pl. 39; Naum. ix. p. 720, Taf. 243; Hewitson, ii. p. 443, pl. cxx. fig. 1; Seebohm, B. Jap. Emp. p. 364; *P. holbœlli*, Reinhardt, Vidensk. Meddel. 1853, p. 76; Ogilvie Grant, Cat. B. Br. Mus. xxvi. p. 542; Tacz. F. O. Sib. O. p. 1253; Ridgway, p. 5.

Grèbe jou-gris, French; *Zambullidor*, Span.; *Svasso collo-rosso*, Ital.; *Rothhalsiger-Lappentaucher*, German; *Roodhalsfuut*, Dutch; *Rödhalset-Lappedykker*, Dan.; *Graastrubet-Lappedykker*, Norweg.; *Gråstrupig-Dopping*, Swed.; *Harmaakulkku-uiku*, Finn.; *Pogannka-krasnocheïa*, Russ.

♂ *ad.* (N. Russia). Crown, nape, and hind neck black; chin, upper throat, and cheeks ashy grey, slightly bordered with white; ruff but slightly developed; fore part and sides of neck rich brownish red; upper parts and wings blackish, the former with paler margins; outer secondaries white; under parts silvery white, the flanks streaked with greyish; bill black, the base of the gape yellow; legs externally greyish black, internally yellow; iris carmine-red. Culmen 1·9, wing 7·2, tarsus 2·2 inch. Female similar but a trifle smaller. In winter the crown, nape, and upper parts are greyer, the upper throat white and the neck brownish grey.

Hab. Europe, north to Greenland, south in winter to North Africa; Asia, north to Kamchatka and the Commander Islands, south to Japan; America from the fur countries south in winter to Pennsylvania; a winter visitant to the British Islands.

In general habits it resembles *P. cristatus*, and like that species frequents inland lakes in summer, and rivers and the sea coast on passage and in winter, but it is a lighter and quicker bird, and takes wing more readily. Its nest and eggs also resemble those of *P. cristatus*, but the eggs, 3 to 4 in number, and laid in May, are smaller, measuring about 2·0 by 1·35.

Examples from North America and Eastern Asia are, as a rule, larger, and have a longer bill, and have therefore by several authors been separated under the name of *P. holbœlli* (first described from Greenland), but I do not see any valid reason for separating them even subspecifically.

1215. SCLAVONIAN GREBE.

PODICIPES AURITUS.

Podicipes auritus (Linn.), Syst. Nat. p. 222 (1766); Gould, B. of Gt. Brit. v. pl. 40; Dresser, viii. p. 645, pl. 631; Tacz. F. O. Sib. O. p. 1256; Ogilvie Grant, Cat. B. Br. Mus. p. 527; Ridgway, p. 5; Saunders, p. 721; Lilford, vi. p. 115, pl. 50; *P. cornutus*, Gmel. Syst. Nat. i. p. 591 (1788); Naum. ix. p. 739, pl. 244; Hewitson, ii. p. 444, pl. cxxi. fig. 3; Gould, B. of E. v. pl. 390; David and Oust. Ois. Chine, p. 513; Seebohm, B. Jap. Emp. p. 367.

Grèbe cornu, French; *Somorerujo*, Span.; *Svasso forestiero*, Ital.; *Gehörnter Lappentaucher*, German; *Kuifduiker*, Dutch; *Seföndi, Flor-godi*, Icel.; *Hornet-Lappedykker*, Dan.; *Sortkravet-Toplom*, Norweg.; *Svarthake-Dopping*, Swed.; *Mustakulkku-uikku*, Finn.

♂ *ad.* (Greenland). Crown and forehead black; lores and a broad band of feathers passing through the eye, forming an elongated tuft on each side of the head ochreous chestnut; chin and ruff brownish black; upper parts brownish black tinged with grey; short secondaries chiefly white; neck in front rich chestnut-red; flanks dull chestnut; rest of under parts silvery white; bill dark horn; the base and tip pink; legs dull greyish black; a narrow ring encircling the pupil of the eye white, the outer ring crimson. Culmen 1·1, wing 5·7, tarsus 1·8 inch. Female similar but duller, with the ruff less developed. In winter the crown, hind neck, and upper parts are deep sooty brown, some of the dorsal feathers edged with slaty-grey; chin, sides of head, throat, and under parts silvery grey, the flanks tinged with brownish grey.

Hab. Europe, north to Southern Greenland and Iceland, south in winter to the Mediterranean and Caspian; in Asia, north to Dauria and the Commander Islands, south and east to Japan and China (rarely); North America from the fur countries to the United States.

In habits it resembles its larger allies, but is more active, and not so clumsy on land, as it can walk, and even run, with tolerable ease. Its nest is a mere collection of herbage, usually floating on the water, and its 2 to 4 eggs, which are usually deposited in May, are yellowish white with a faint bluish tinge, dull and chalky in texture of shell, and measure about 1·75 by 1·23.

1216. EARED GREBE.

PODICIPES NIGRICOLLIS.

Podicipes nigricollis, E. L. Brehm, Vög. Deutschl. p. 963 (1831); Gould, B. of Gt. Brit. v. pl. 41; Dresser, viii. p. 651, pl. 632; David and Oust. Ois. Chine, p. 513; Seebohm, B. Jap. Emp. p. 366; Blanf. F. Brit. Ind. Birds, p. 474; Ogilvie Grant, Cat. B. Br. Mus. xxvi. p. 532; Tacz. F. O. Sib. O. p. 1258; Saunders, p. 723; Lilford, vi. p. 117, pl. 51; *P. auritus*, Lath. (nec. Linn.), Ind. Orn. ii. p. 781 (1790); ii. (Naum.), ix. p. 768, Taf. 246; Hewitson, ii. p. 445, pl. cxxi. fig. 2; Gould, B. of E. v. pl. 391.

Grèbe oreillard, French; *Mergulhão*, Portug.; *Svasso piccolo*, Ital.; *Geöhrter Steissfuss*, German; *Geoorde-Fuut*, Dutch; *Öret-Lappedykker*, Dan.; *Sorthalset-Toplom*, Norweg.; *Svarthalsad-Dopping*, Swed.; *Ouchastaya-Gagara*, Russ.

♂ *ad.* (Sarepta). Differs from *P. auritus* in having the head, neck, and upper parts black; a broad stripe from the eye covering the auriculars warm golden yellow, the flanks fox-red, and the lower abdomen greyish black; bill upcurved, black, reddish at the base; legs dull greenish black; iris bright red. Culmen 0·92, wing 4·9, tarsus 1·6 inch. Sexes alike. In winter the golden stripe is absent, and the chin and throat are white.

Hab. Central and Southern Europe, rare in Sweden, Finland, and Britain, but has bred in Denmark; Africa in winter; Asia north to Dauria, east to Japan, south to China and India.

In habits and nidification this Grebe resembles *P. auritus*. Its call-note is a soft, clear *bib, bib,* and its pairing cry a clear *bide wide wide wide wide.* Its 4 to 5 eggs, which are laid in May, resemble those of *P. auritus,* and measure about 1·66 by 1·17.

1217. LITTLE GREBE.

PODICIPES FLUVIATILIS.

Podicipes fluviatilis (Tunstall), Orn. Brit. p. 3 (1771); Dresser, viii. p. 659, pl. 633; Ogilvie Grant, Cat. B. Br. Mus. xxvi. p. 507; Saunders, p. 725; *P. minor* (Gmel.), Syst. Nat. i. p. 591 1788; (Naum.), ix. p. 785, Taf. 247; Hewitson, ii. p. 446, pl. cxxi. fig. 1; Gould, B. of E. v. pl. 392; id. B. of Gt. Brit. v. pl. 42; Seebohm, B. Jap. Emp. p. 367; Lilford, vi. 119, pl. 52.

Le Castagneux, French; *Mergulhão alça-cu,* Portug.; *Zambullidor,* Span.; *Tuffetto,* Ital.; *Kleiner-Steissfuss,* German; *Dodaers,* Dutch; *Lille-Lappedykker,* Dan.; *Liden-Toplom,* Norweg.; *Små-Dopping,* Swed.; *Pikku-uikku,* Finn.; *El-ghotis,* Moor.; *Kaitsumuri,* Jap.

♂ *ad.* (Alexandria). Crown, nape, hind neck, chin, and lores blackish brown; sides of head, neck, and entire throat rich chestnut-red; upper parts blackish tinged with grey; short secondaries white, externally margined with dark grey; breast and flanks blackish grey; rest of under parts dark silvery grey; bill blackish, the base of the gape lemon-yellow; legs and feet dull horny greenish; iris bright brown. Culmen 0·97, wing 3·9, tarsus 1·4 inch. Sexes alike. In winter the rufous is lacking, the chin and upper throat being white, the sides of head and lower throat rufous buff.

Hab. Europe generally, from Scandinavia and Britain to North Africa; Asia Minor, and Central Asia east to Japan, but not ranging north to Siberia. In India and S. Africa it is replaced by a nearly allied subspecies, *P. capensis,* Lichtenstein, (*P. albipennis,* Sharpe).

In general habits the Little Grebe does not differ from its allies, but does not take wing so readily as the two preceding species, preferring to seek safety by diving. It frequents inland lakes and ponds, especially where there is abundant cover, and is shy and wary. It feeds on insects, larvæ, small fish, and frogs, and occasionally on vegetable matter. Its call-note is a soft and not unpleasant *bib-bibib*, uttered several times in succession. Its nest is a large mass of aquatic herbage placed either near, or floating on, the water; its eggs, 3 to 6 in number, which are usually laid late in April or early in May, resemble those of *P. nigricollis*, but are much smaller, measuring about 1·55 by 1·04. After a very short period of incubation the eggs of all the Grebes become very discoloured, and are sometimes dark brown. The young of all our Grebes resemble the adult in winter dress but are duller, and the young in down are blackish or brownish above, striped with rufous or whitish brown, the under parts white.

APPENDIX

Since this work was commenced many sub-species have been described, only some of which have been included or referred to, and it appears that two species have been inadvertently omitted. These two are the following, viz. :

MYIOPHONEUS, Temminck, 1823.

1218. HIMALAYAN WHISTLING THRUSH.

MYIOPHONEUS TEMMINCKI.

Myiophoneus temmincki, Vigors, P.Z.S. 1831, p. 171; Gould. Cent. Himal. B. pl. 21; Severtz. Turk. Jevot. p. 65; Sharpe, Cat. B. Br. Mus. vii. p. 8; Oates, F. Brit. Ind. Birds, i. p. 178; *M. cœruleus*, Horsf. and Moore, Cat. i. p. 199 (nec. Scop.).

Kastura, in the N.W. Himalayas.

♂ *ad.* (Himalayas). Plumage generally blackish blue, the feathers tipped with silvery blue; lores and base of forehead black, the forehead above cobalt-blue; wings and tail cobalt-blue on the outer webs; lesser wing-coverts broadly margined with cobalt-blue; median wing-coverts with whitish tips; bill yellow, the culmen and base of upper mandible blackish; legs black; iris brown. Culmen 1·45, wing 7·0, tail 5·7, tarsus 2·0 inch. Sexes alike. The young bird lacks the silvery blue tips to the feathers, and has the underparts dull black.

Hab. The Himalayas from the Hazara country and Gilgit to Assam; Arrakan and probably the whole country west of the Irrawady river; Karennee and the Karen hills; Turkestan and Afghanistan.

Frequents hill-streams and torrents, in summer up to 11,000 feet, and perches on rocks and crags; its food consists largely of snails, and its note is a loud and pleasing whistle. It breeds from April to June, and places its massive cup-shaped nest, which is constructed of roots and moss, in a crevice of a rock, or in the root of some upturned tree in the river-bed near or under a waterfall, and lays 3 to 5 eggs, which are pale greenish grey or greyish white minutely speckled with pink, pale purplish-pink, or pinkish-brown dots. Examples in my collection are almost uniform greyish white, the dots being scarcely visible, and in size vary from 1·57 to 1·87 in length and from 0·95 to 1·0 in breadth.

1219. Japanese Wren.

TROGLODYTES FUMIGATUS.

Troglodytes fumigatus, Temm. Man. d'Orn. iii. p. 161 (1835) ; David and Oust. Ois. Chine, p. 225 ; (Sharpe), Cat. B. Br. Mus. vi. p. 276, pl. xvi. fig. 2 ; Seebohm, B. Jap. Emp. p. 89 ; Tacz. F. O. Sib. O. p. 206 ; *T. dauricus*, Dyb. and Tacz. Bull. Soc. Zool. Fr. 1884, p. 155.

Misosazai, Jap.

♂ *ad.* (Japan). Differs from *T. parvulus* in being more rufous and much darker and, as a rule more distinctly barred both on the upper and under parts ; bill brown, the lower mandible yellowish ; feet rufous, the claws yellowish ; iris brown. Culmen 0·5, wing 2·1, tail 1·2, tarsus 0·7 inch. Examples, even from the same locality, vary considerably in colour some being paler than others.

Hab. Eastern Siberia, Northern China, Corea, and Japan.

In its general habits this species is said to resemble *T. parvulus*, but is wilder ; it is found high up in the mountains of Japan in the summer, and in winter frequents bushes near streams in the lowlands. Its song is described by Mr. Jouy as low, delicious, and warbling, similar to that of the American Winter Wren.

Taczanowski separates the form from Dauria, the Ussuri country, and Corea, subspecifically under the name *T. dauricus*, but I doubt if the slight differences in colour justify this. Dr. Stejneger also considers the form from Bering Island as separable, and described it (Zeit. Gesammt. Orn. 1884, p. 11) under the name *T. pallescens*, and he likewise separates under the name *T. fumigatus kurilensis* (Proc. U.S. Nat. Mus. 1888, p. 548) the Wren from the Kurile Islands.

The nest of this Wren resembles that of *T. parvulus* and its eggs 6 to 7 in number, are laid late in April or in May, and also resemble those of that species, being white faintly dotted with red, and average 0·7 by 0·52.

Of the sub-species not included I may name the following, viz.:

Turdus coburni, Sharpe, Bull. B.O.C. xii. p. 28 (1901), of which I have examined the type, appears to me to be merely a pale variety of *T. iliacus*. *Cinclus olympicus*, von Madarasz, Orn. Monatsb. xi. p. 6 (1903), from Cyprus, appears to be an insular form of *C. cashmiriensis*, and *Cinclus bilkevitchi*, Zarudny, Orn. Jahrb. viii. p. p. 57 (1902), seems also to be very close to that sub-species.

Saxicola albicollis has been separated into two forms, the eastern and western. Of these the eastern form *Saxicola amphileuca*, Ehr. (Symb. Phys. fol. *b. b.* (1829)), inhabits Asia Minor, Transcaspia, Palestine, Syria, Arabia, Egypt, ranging as far west as Albania, Dalmatia, and Greece, and as far east probably as Persia, whereas the western form *Saxicola albicollis* (Vieill.), Nouv. Dict. xxi. p. 424 (1818), is found west of Greece to Spain, Morocco, and Algeria. The difference between these two consists in the eastern form having a black line across the forehead, in being as a rule rather smaller in size, and in having generally the white in the plumage less tinged with pale rufous, whereas the western form has the forehead white without any black line, and the white portions of the plumage are more tinged with rufous. It has also the under-surface of the quills as a rule paler, but this character I find on examining a series so variable that it can scarcely be taken into consideration.

Of *Saxicola lugens* also an eastern and western form have been recognised, the former as *S. lugens*, and the latter as *S. halophila*, Tristram, but I have not yet been able to examine a sufficiently large series to be quite sure if this view is correct.

Saxicola semenovi, Bianchi and Zarudny, Ann. Mus. Zool. Acad. Imp. St. Petersburg, v. No. 1, pp. 187, 189 (1900), from Eastern Persia, appears to be very close to, if not identical with *S. chrysopygia*. *Cyanecula discessa*, von Madarasz, Term. Füzetek, xxv. p. 489 (1902), and *Sylvia clara*, Kleinsch. Orn. Monatsb. ix. p. 167 (1901), I have not seen, but the latter appears to be very close to *Sylvia hortensis*. *Parus corsus*, Kleinsch., from Corsica, seems to be scarcely separable from *Parus major*. *Parus atlas*, Meade Waldo, Bull. Brit. Orn. Club. xii. p. 27 (1901), from the Atlas Mountains, and *Parus moltchanovi*, Menzbier, Bull. B.O.C. xiii. p. 49 (1903), from the Crimea, are both local forms of *Parus phœonotus*. *Motacilla subpersonata*, Meade Waldo, Bull. B.O.C. xii. p. 27 (1901), is a form of *M. personata* from Morocco. *Cotile mauritanica*, Meade Waldo, Bull. B.O.C. xii. p. 27 (1901), from Morocco, is described as being nearest to *C. minor*, but much paler. *Loxia guillemardi*, von Madarasz, Orn. Monatsb. xi. p. 5 (1903), is a form or race of *Loxia curvirostra* from Cyprus. *Garrulus glaszneri*, von Madarasz, Orn. Monatsb. x. p. 163 (1902), from Cyprus, of which I have examined a skin in the Tring Museum, differs slightly from *G. glandarius* in being darker, with no white on the forehead, the chin and extreme upper throat white, but the rest of the under parts uniform dark to the vent. Culmen 0·94, wing 5·8, tail 5·2, tarsus 1·22 inch. *Asio canariensis*, von Madarasz, Orn. Monatsb. ix. p. 54 (1901), is the short-eared owl from the Canaries which I do not consider as separable from *A. accipitrinus*. *Scops semenovi*, Zarudny and Härms, Orn. Monatsb. x. p. 49 (1902), from Baluchistan, is described as being closely allied to *Scops brucii*. *Strix ernesti*, Kleinschm. Orn. Monatsb. ix. p. 168 (1901), is the dark race of *Aluco flammeus* from Sardinia, and *Accipiter wolterstorffi*, Kleinschm. Orn. Monatsb. ix. p. 168 (1901), is described as being a small dark form of *Accipiter nisus* from Sardinia.

Sub-species described under trinomial titles I have not considered it necessary to include.

ENGLISH INDEX

PAGE

ACCENTOR, Alpine 148
Accentor, Black-throated 152
Accentor, Brown 153
Accentor, Himalayan 150
Accentor, Japanese 155
Accentor, Koslov's 155
Accentor, Mountain 153
Accentor, Red-breasted 151
Accentor, Rufous-breasted 151
Albatross, Black-browed 860
Albatross, Black-footed 859
Albatross, Short-tailed 859
Auk, Ancient 868
Auk, Crested 869
Auk, Great 862
Auk, Japanese 869
Auk, Least 870
Auk, Little 864
Auk, Parroquet 871
Auk, Partridge 867
Auk, Short-billed 868
Auk, Whiskered 870
Avocet 752

BABBLER, Chinese 145
Babbler, David's 147
Babbler, White-browed 146
Bee-eater 465
Bee-eater, Blue-cheeked 466
Bee-eater, Green 467
Bittern 578
Bittern, American 579
Bittern, Chestnut 577
Bittern, Chinese, Little 576
Bittern, Little 575
Bittern, Schrenck's, Little 578
Blackbird 17
Blackcap 84
Blood-Pheasant 675
Blood-Pheasant, Chinese 675
Blood-Pheasant, Grey-necked 676
Blue-Chat, Hodgson's 61

PAGE

Blue-Chat, Siberian 70
Bluetail, Redflanked 69
Blue-throat, Red-spotted 62
Blue-throat, White-spotted 61
Brambling 311
Brant, Black 595
Broadbill, Indian 464
Bulbul, Brown-eared 226
Bulbul, Dusky 222
Bulbul, Palestine 223
Bulbul, Red-vented 225
Bulbul, White-cheeked 224
Bulbul, White-eared 224
Bullfinch 333
Bullfinch, Azorean 337
Bullfinch, Beavan's 337
Bullfinch, Cassin's 336
Bullfinch, Crimson-winged 328
Bullfinch, Desert 329
Bullfinch, Mongolian Desert 331
Bullfinch, Oriental 335
Bullfinch, Persian Desert 330
Bunting, Black-faced 350
Bunting, Black-headed 346
Bunting, Chestnut 348
Bunting, Chinese Meadow 366
Bunting, Cinereous 352
Bunting, Cirl 354
Bunting, Corn 343
Bunting, Cretzschmar's 358
Bunting, Godlevski's Meadow 369
Bunting, Grey-headed 360
Bunting, Grey-necked 357
Bunting, House- 345
Bunting, Jankovski's 365
Bunting, Japanese 350
Bunting, Japanese Grey 361
Bunting, Japanese Meadow- 365
Bunting, Japanese Reed- 370
Bunting, Japanese Yellow 351
Bunting, Lapland 373
Bunting, Little 363
Bunting, Meadow- 368

PAGE
Bunting, Pine 359
Bunting, Red-headed 347
Bunting, Reed- 370
Bunting, Rose 372
Bunting, Rustic 362
Bunting, Siberian Meadow . . 364
Bunting, Snow 374
Bunting, Striped 344
Bunting, White-capped . . . 367
Bunting, Yellow-breasted . . 349
Bunting, Yellow-browed . . . 356
Bunting, Yellow-throated . . 355
Bush-Babbler, Algerian . . . 144
Bush-Babbler, Indian 145
Bush-Babbler, Palestine . . . 144
Bush-Chat, Hodgson's . . . 45
Bush-Warbler, Chinese . . . 138
Bush-Warbler, Japanese . . . 139
Bush-Warbler, Large-billed . 129
Bush-Warbler, Short-tailed . 140
Bush-Warbler, Spotted . . . 128
Bustard 723
Bustard, Houbara 726
Bustard, Little 725
Bustard, Macqueen's 727
Bustard, Siberian 724
Buzzard 509
Buzzard, Himalayan Rough-legged 515
Buzzard, Honey 538
Buzzard, Long-legged 512
Buzzard, Rough-legged . . . 514
Buzzard, Upland 511
Buzzard-Eagle, Grey-faced . . 513

CAHOW 854
Canary Bird 281
Capercailly 695
Capercailly, Siberian 697
Chaffinch 306
Chaffinch, Algerian 309
Chaffinch, Canarian 307
Chaffinch, Teydean 310
Chat, Canarian 44
Chat, Hodgson's Blue 61
Chat, Hodgson's Bush- . . . 45
Chat, White-throated . . . 68
Chiffchaff 97
Chiffchaff, Siberian 98
Chough 405
Chough, Alpine 406
Chough, Brown Ground- . . . 409
Chough, Henderson's Ground- . 408
Chough, Pander's Ground- . . 406
Chough, Persian Ground- . . 407
Chough, White-tailed Ground- . 408
Citril-Finch 278

PAGE
Coot 716
Coot, Crested 717
Cormorant 555, 557
Cormorant, African 559
Cormorant, Pallas's 557
Cormorant, Pelagic 558
Cormorant, Pygmy 560
Comorant, Red-faced 557
Comorant, Temminck's . . . 556
Corn Crake 711
Courser, Cream-coloured . . . 730
Crake, Baillon's 707
Crake, Button 709
Crake, Corn- 711
Crake, Little 708
Crake, Ruddy 710
Crake, Siberian Ruddy . . . 710
Crake, Spotted 706
Crane, Black-necked 718
Crane, Canadian 720
Crane, Common 717
Crane, Demoiselle 721
Crane, Hooded 720
Crane, Manchurian 719
Crane, Sarus 721
Crane, Siberian 723
Crane, White-necked 722
Creeper, Himalayan Tree- . . 194
Creeper, Tree- 192
Creeper, Wall- 194
Crossbill, Common 339
Crossbill, Two-barred 343
Crossbill, White-winged . . . 342
Crow, Black 421
Crow, Grey 421
Crow, Jungle 422
Cuckoo 468
Cuckoo, Black-billed 475
Cuckoo, Great Spotted . . . 472
Cuckoo, Greyheaded 471
Cuckoo, Hawk- 473
Cuckoo, Himalayan 490
Cuckoo, Hodgson's Hawk- . . 474
Cuckoo, Indian 471
Cuckoo, Yellow-billed . . . 474
Curlew, Australian 804
Curlew, Common 803
Curlew, Eskimo 800
Curlew, Pigmy 774
Curlew, Slender-billed . . . 802
Curlew, Stone 727

DIPPER, Black-bellied . . . 24
Dipper, Brown 27
Dipper, European 25
Dipper, Pallas' 28
Dipper, Sombre 28

PAGE
Diver, Black-throated . . . 875
Diver, Great Northern . . . 876
Diver, Red-throated 874
Diver, White-billed 877
Dotterel 743
Dotterel, Eastern 736
Dove, Canarian 643
Dove, Chinese Turtle 648
Dove, Collared Turtle . . . 649
Dove, Eastern Ring 646
Dove, Eversmann's Turtle . . 648
Dove, Hill, Rock 641
Dove, Indian Brown Turtle . . 650
Dove, Indian Stock 642
Dove, Isabelline Turtle . . . 647
Dove, Japanese 646
Dove, Madeiran 644
Dove, Red Turtle 651
Dove, Ring 645
Dove, Rock 639
Dove, Senegal Turtle 650
Dove, Stock 642
Dove, Surat Turtle 651
Dove, Turtle 646
Dove, White-backed 641
Duck, Bær's 621
Duck, Buffle-headed 623
Duck, Dipper 623
Duck, Harlequin 624
Duck, Long-tailed 625
Duck, Mandarin 603
Duck, Marbled 607
Duck, Ring-billed 605
Duck, Scaup 618
Duck, Spirit 623
Duck, Steller's 630
Duck, Tufted 619
Duck, White-eyed 620
Duck, White-headed 634
Duck, Wild 604
Dunlin 769

Eagle, Bald 525
Eagle, Bonelli's 516
Eagle, Booted 515
Eagle, Corean Sea- 526
Eagle, Golden 522
Eagle, Greater Spotted . . . 517
Eagle, Imperial 521
Eagle, Kamchatkan Sea- . . . 526
Eagle, Lesser Spotted . . . 518
Eagle, Nepalese Hawk . . . 528
Eagle, Sea- 524
Eagle, Short-toed 527
Eagle, Steppe 519
Eagle, Tawny 520
Eagle, White-shouldered . . 522

PAGE
Egret, Cattle 570
Egret, Great White 566
Egret, Japanese 568
Egret, Little 568
Egret, Smaller White . . . 567
Eider 631
Eider, King 632
Eider, Pacific 632
Eider, Spectacled 633
Eider, Steller's 630

Falcon, Barbary 546
Falcon, Eastern Red-legged . 551
Falcon, Eleonora's 549
Falcon, Greenland 540
Falcon, Iceland 541
Falcon, Peregrine 544
Falcon, Red-legged 550
Falcon, Shanghar 544
Fieldfare 8
Fieldfare, Redtailed 9
Finch, Altai Ground- 302
Finch, Citril 278
Finch, Hodgson's Ground- . . 302
Finch, Nepal Rose 276
Finch, Red-fronted 282
Finch, Scarlet 321
Finch, Serin 280
Fire-crested Wren 93
Flamingo 587
Flycatcher, Brown 252
Flycatcher, Chinese Paradise . 262
Flycatcher, Corean 260
Flycatcher, Indian Paradise . 260
Flycatcher, Japanese Blue . . 258
Flycatcher, Japanese Paradise . 261
Flycatcher, Mugimaki . . . 257
Flycatcher, Narcissus . . . 259
Flycatcher, Pied 254
Flycatcher, Red-breasted . . 256
Flycatcher, Siberian 251
Flycatcher, Spotted 253
Flycatcher, White-collared . . 255
Francolin 681
Francolin, Senegal 682
Fulmar 858

Gadwall 605
Gallinule, Allen's 714
Gallinule, Green-backed . . . 713
Gallinule, Indian 713
Gallinule, Purple 712
Gannet 561
Garganey 609
Godwit, Bar-tailed 797
Godwit, Black-tailed 798

PAGE
Gold-crest, Canarian 92
Gold-crest, Madeiran 94
Golden-crested Wren 91
Golden-eye 621
Golden-eye, Barrow's 622
Goldfinch 274
Goldfinch, Asiatic 275
Goosander 635
Goose, Bar-headed 593
Goose, Bean 589
Goose, Bernacle 596
Goose, Brent 594
Goose, Chinese 593
Goose, Emperor 598
Goose, Grey-Lag 588
Goose, Hutchins's 595
Goose, Lesser White-fronted . 592
Goose, Pink-footed 590
Goose, Red-breasted 596
Goose, Snow 597
Goose, White-fronted 591
Goshawk 529
Grebe, Eared 880
Grebe, Great Crested 877
Grebe, Little 881
Grebe, Red-necked 878
Grebe, Sclavonian 879
Greenfinch 283
Greenfinch, Chinese 284
Greenshank 786
Greenshank, Nordmann's . . 787
Griffon, Himalayan 499
Grosbeak, Allied 288
Grosbeak, Chinese 286
Grosbeak, Japanese 285
Grosbeak, Pine 338
Grosbeak, White-winged . . 288
Ground-Finch, Altai 302
Ground-Finch, Hodgson's . . 302
Grouse, Black 698
Grouse, Georgian Black . . . 699
Grouse, Menzbier's Hazel . . 701
Grouse, Mongolian Hazel . . 701
Grouse, Red 693
Grouse, Siberian Spruce . . . 700
Grouse, Willow 692
Guillemot 862
Guillemot, Black 864
Guillemot, Brünnich's . . . 863
Guillemot, Mandts 865
Guillemot, Pigeon 866
Guillemot, Sooty 866
Gull, Adriatic 825
Gull, Audouin's 831
Gull, Black-headed 824
Gull, Black-tailed 832
Gull, Bonaparte's 826
Gull, Brown-headed 825

PAGE
Gull, Common 829
Gull, Cuneate-tailed 821
Gull, Glaucous 837
Gull, Glaucous-winged . . . 838
Gull, Greater Black-backed . . 836
Gull, Great Black-headed . . 827
Gull, Herring 832
Gull, Iceland 838
Gull, Ivory 821
Gull, Lesser Black-backed . . 834
Gull, Little 828
Gull, Sabine's 820
Gull, Saunders's 827
Gull, Siberian 835
Gull, Slaty-backed 836
Gull, Slender-billed 830
Gyrfalcon 539
Gyrfalcon, Altai 542
Gyrfalcon, Lorenz's 542

HARRIER, Eastern Marsh . . 504
Harrier-Hen 507
Harrier, Marsh 503
Harrier, Montagu's 505
Harrier, Pallid 506
Harrier, Pied 508
Hawfinch 287
Hawk, Levant Sparrow . . . 531
Hawk, Many-banded 533
Hazel-Hen 700
Hedge-Sparrow 154
Hemipode, Andalucian . . . 703
Hemipode, Burmese 704
Heron, Black-necked 566
Heron, Buff-backed 569
Heron, Chinese Pond 572
Heron, Grey 564
Heron, Japanese Night . . . 574
Heron, Little Green 575
Heron, Night 573
Heron, Pond 572
Heron, Purple 565
Heron, Squacco 571
Hobby 548
Hoopoe 467
Hypocolius, Grey 250

IBIS, Glossy 586
Ibis, Japanese 585
Ibis, Red-cheeked 586
Ibis, Sacred 584
Ibis, White 584
Ibis-bill 805

PAGE
JACKDAW 419
Jackdaw, Daurian 419
Jay 411
Jay, African 412
Jay, Algerian Black-headed 414
Jay, Brandt's 413
Jay, Japanese 415
Jay, Lidth's 415
Jay, Persian 412
Jay, Siberian 410
Jay, Syrian 413
Jay, Turkish Black-headed 414

KESTREL 552
Kestrel, Lesser 553
Kingfisher 458
Kingfisher, Black-capped 462
Kingfisher, Himalayan Pied 460
Kingfisher, Pied 459
Kingfisher, Ruddy 460
Kingfisher, Smyrna 461
Kite 534
Kite, Black 535
Kite, Black-eared 536
Kite, Black-winged 537
Kite, Yellow-billed 537
Kittiwake 822
Kittiwake, Red-legged 823
Knot 775
Knot, Eastern 776

LANDRAIL 711
Lanner 546
Lapwing 749
Lapwing, Grey-headed 748
Lapwing, Red-Wattled 747
Lark, Algerian Shore- 380
Lark, Andalucian Short-toed 395
Lark, Atlas Mountain Shore- 381
Lark, Bifasciated 375
Lark, Black 386
Lark, Calandra 382
Lark, Crested 390
Lark, Desert 397
Lark, Dupont's 376
Lark, Eastern Calandra 384
Lark, Eastern Shore- 381
Lark, Elwes's Shore- 379
Lark, Gould's Desert- 398
Lark, Lesser Short-toed 394
Lark, Long-billed Calandra 383
Lark, Mongolian 385
Lark, Pale Short-toed 396
Lark, Pallas's Short-toed 395
Lark, Shore- 378
Lark, Short-toed 393

PAGE
Lark, Thick-billed 377
Lark, White-winged 385
Laughing Thrush, Elliott's 147
Linnet 312
Linnet, Aleutian Ground- 305
Linnet, Brandt's Ground- 303
Linnet, Giglioli's Ground- 304
Linnet, Japanese Ground- 305
Linnet, Siberian Ground- 303
Linnet, Tibetan Ground- 306

MAGPIE 417
Magpie, Azure-winged 416
Magpie, Chinese Blue 417
Magpie, Eastern Blue 416
Magpie, Moorish 418
Marsh-Warbler 118
Martin, Black-chinned 271
Martin, Crag- 273
Martin, House- 269
Martin, Pale Crag- 273
Martin, Sand- 271
Merganser, Hooded 637
Merganser, Red-breasted 636
Merlin 547
Minivet, Ashy 263
Minivet, Short-billed 263
Monâl 673
Monâl, Chinese 674
Moorhen 715

NIGHTINGALE 71, 84
Nightingale, Persian 72
Nightingale, Thrush 72
Nightjar, Egyptian 435
Nightjar, European 432
Nightjar, Indian 434
Nightjar, Russet-necked 433
Nightjar, Sykes's 436
Noddy 819
Nutcracker 409
Nuthatch 188
Nuthatch, Chinese 190
Nuthatch, Corsican 190
Nuthatch, Krueper's 189
Nuthatch, Mongolian 191
Nuthatch, Northern 186
Nuthatch, Rock 191

ORIOLE, Black-naped 228
Oriole, Golden 226
Oriole, Indian 227
Ortolan 356
Osprey 554
Ousel, Water 60
Owl, African Eared 485

PAGE
Owl, Barn 497
Owl, Collared 494
Owl, Eagle 489
Owl, Eastern Little 497
Owl, Egyptian Eagle- 492
Owl, Hairy 495
Owl, Hawk- 481
Owl, Japanese, Eagle- . . . 491
Owl, Lapp 479
Owl, Little 496
Owl, Long-eared 483
Owl, Pigmy 493
Owl, Rock Eagle- 492
Owl, Rough-footed Scops . . 489
Owl, Scops- 486
Owl, Short-eared 484
Owl, Snowy 480
Owl, Tawny 476
Owl, Tengmalm's 482
Owl, Ural 477
Oyster-catcher 751
Oyster-catcher, African Black . 752

PARTRIDGE 682
Partridge, Barbary 679
Partridge, Chukar 678
Partridge, Daurian 683
Partridge, Greek 677
Partridge, Kansu 684
Partridge, Mongolian 678
Partridge, Red-legged . . . 679
Partridge, Seesee 680
Partridge, Tibetan 684
Pelican, Dalmatian 563
Pelican, Roseate 562
Peregrine, Lesser 545
Petrel, Bulwer's 857
Petrel, Capped 855
Petrel, Collared 856
Petrel, Fork-tailed 847
Petrel, Frigate 849
Petrel, Harcourt's 845
Petrel, Japanese 856
Petrel, Japanese, Black . . . 846
Petrel, Leach's 844
Petrel, Soft-plumaged . . . 855
Petrel, Sooty 846
Petrel, Storm 843
Petrel, Swinhoe's 847
Petrel, Wilson's 848
Phalarope, Grey 755
Phalarope, Red-necked . . . 754
Pheasant 658
Pheasant, Blood 675
Pheasant, Chinese Blood . . . 675
Pheasant, Golden 668

PAGE
Pheasant, Grey-necked Blood . 676
Pheasant, Japanese 664
Pheasant, Lady Amherst's . . 669
Pheasant, Mongolian 665
Pheasant, Moupin 686
Pheasant, Murghab 660
Pheasant, Persian 661
Pheasant, Ring-necked . . . 665
Pheasant, Severtzoff's . . . 662
Pheasant, Shaw's 660
Pheasant, Sœmmerring's . . . 667
Pheasant, Strauch's 663
Pheasant, Tibetan 687
Pheasant, Vlangal's 664
Pigeon, Bolle's 644
Pigeon, Siebold's Green . . . 639
Pigeon, Wood 645
Pintail 613
Pipit, Blyth's 220
Pipit, Brown Rock 220
Pipit, Canarian 211
Pipit, Hodgson's 215
Pipit, Petchora 217
Pipit, Red-throated 213
Pipit, Richard's 219
Pipit, Rock 216
Pipit, Tawny 218
Pipit, Tree- 211
Pipit, Water 214
Plover, Black-headed 744
Plover, Caspian 736
Plover, Eastern Golden . . . 732
Plover, Golden 731
Plover, Greater Sand 734
Plover, Grey 733
Plover, Kentish 737
Plover, Killdeer 741
Plover, Kittlitz's 742
Plover, Little Ringed 740
Plover, Long-billed Ringed . . 739
Plover, Ringed 738
Plover, Semipalmated 740
Plover, Sociable 745
Plover, Spur-winged 745
Plover, White-tailed 746
Pochard 617
Pochard, Red-crested 616
Pratincole 728
Pratincole, Nordmann's . . . 730
Ptarmigan, Alpine 693
Ptarmigan, Rock 694
Pucras, Chesnut-bellied . . . 670
Pucras, Meyer's 671
Pucras, Mongolian 670
Puffin 873
Puffin, Hornbilled 871
Puffin, Horned 873
Puffin, Tufted 872

PAGE
QUAIL 685

RAIL, Water 704
Raven 423
Raven, Brown-necked 424
Raven, Fantail 425
Raven, Irby's 425
Razorbill 861
Redbreast 63
Redbreast, Japanese 65
Redbreast, Persian 64
Redbreast, Temminck's 64
Redpoll, Greenland 317
Redpoll, Lesser 316
Redpoll, Mealy 315
Redshank 783
Redshank, Spotted 784
Redstart 48, 50
Redstart, Black 54
Redstart, Blue-fronted 58
Redstart, Blue-headed 57
Redstart, Daurian 52
Redstart, Ehrenberg's 50
Redstart, Eversmann's 53
Redstart, Gould's 55
Redstart, Güldenstadt's 53
Redstart, Hodgson's 51
Redstart, Indian 50
Redstart, Plumbeous 58
Redstart, Prjevalsky's 54
Redstart, White-capped 60
Redstart, White-throated 56
Redwing 6
Reedling, Bearded 156
Reed-Warbler 117
Reed-Warbler, Blyth's 116
Reed-Warbler, Clamorous 120
Reed-Warbler, Eastern Great 120
Reed-Warbler, Great 119
Reed-Warbler, Schrenk's 121
Reeve 781
Ring-Dove 645
Ring-Dove, Eastern 646
Ring Ousel 19
Robin, Swamp 5
Rock-Dove 639
Rock-Dove, Hill 641
Rock Thrush 28
Rock Thrush, White-throated 22
Roller 462
Roller, Indian 463
Rook 426
Rook, Eastern 427
Rose-finch 324
Rose-finch, Brandt's 323
Rose-finch, Caucasian 319
Rose-finch, Edwards' 326

PAGE
Rose-finch, Hodgson's 325
Rose-finch, Long-tailed 332
Rose-finch, Nepal 276
Rose-finch, Redbreasted 318
Rose-finch, Sinaitic 322
Rose-finch, Stoliczka's 320
Rose-finch, Three-banded 323
Rose-finch, Vinous 325
Rose-finch, White-browed 327
Ruby-Throat, Himalayan 67
Ruby-Throat, Siberian 65
Ruby-Throat, Tibetan 66
Ruff 780

SAKER 543
Sanderling 779
Sand-Grouse, Black-bellied 652
Sand-Grouse, Coronetted 653
Sand-Grouse, Pallas's 657
Sand-Grouse, Pintailed 654
Sand-Grouse, Senegal 655
Sand-Grouse, Singed 656
Sand-Grouse, Tibetan 658
Sandpiper, Baird's 767
Sandpiper, Bartram's 782
Sandpiper, Bonaparte's 768
Sandpiper, Broad-billed 764
Sandpiper, Buff-breasted 782
Sandpiper, Green, 789
Sandpiper, Grey-rumped 793
Sandpiper, Marsh 787
Sandpiper, Pectoral 766
Sandpiper, Purple 776
Sandpiper, Sharp-tailed 767
Sandpiper, Solitary 790
Sandpiper, Spoon-billed 780
Sandpiper, Spotted 792
Sandpiper, Terek 794
Sandpiper, Wandering 794
Sandpiper, Western Semipalmated 778
Sandpiper, Wood 790
Scoter, American 628
Scoter, Black 627
Scoter, Kamchatkan 627
Scoter, Surf 629
Scoter, Velvet 626
Scrub-Warbler, Algerian 143
Scrub-Warbler, Streaked 142
Sea-Eagle 524
Sea-Eagle, Pallas's 523
Serin Finch 280
Serin, Tristram's 281
Shag 558
Shearwater, Eastern Dusky 854
Shearwater, Flesh-coloured 853
Shearwater, Great 851

PAGE
Shearwater, Japanese 852
Shearwater, Manx 849
Shearwater, Mediterranean 852
Shearwater, Slender-billed 853
Shearwater, Sooty 851
Sheldrake, Burrow 601
Sheldrake, Ruddy 602
Shikra 530
Shortwing, Hodgson's 59
Shoveller 606
Shrike, Algerian Grey 235
Shrike, American Grey 231
Shrike, Bay-backed 237
Shrike, Brown Red-tailed 240
Shrike, Bull-headed 242
Shrike, Finsch's Grey 234
Shrike, Great Grey 228
Shrike, Grey-backed 245
Shrike, Grimm's Grey 233
Shrike, Hooded 248
Shrike, Indian Grey 233
Shrike, Isabelline 238
Shrike, Japanese Red-tailed 241
Shrike, Lesser Grey 236
Shrike, Long-tailed Grey 230
Shrike, Masked 247
Shrike, Mongolian Grey 231
Shrike, Pallid 232
Shrike, Philippine Red-tailed 242
Shrike, Radde's Grey 244
Shrike, Red-backed 237
Shrike, Rufous-backed 245
Shrike, Severtzoff's Rufous 240
Shrike, Southern Grey 234
Shrike, Thick-billed 243
Shrike, White-winged 230
Shrike, Woodchat 246
Siskin 276
Siskin, Himalayan 277
Siskin, Tibetan 278
Skua, Arctic 841
Skua, Buffon's 842
Skua, Great 839
Skua, Pomatorhine 840
Skylark 387
Skylark, Indian 389
Smew 638
Snipe, Double 758
Snipe, Jack 763
Snipe, New Holland 762
Snipe, Painted 757
Snipe, Pin-tailed 761
Snipe, Red-breasted 795
Snipe, Semipalmated 796
Snipe, Single 759
Snipe, Solitary 763
Snipe, Summer 791
Snipe, Swinhoe's 762

PAGE
Snow-Finch 297
Snow-Finch, Adams's 299
Snow-Finch, Blanford's 301
Snow-Finch, David's 301
Snow-Finch, Mandelli's 299
Snow-Finch, Red-necked 300
Snow-Partridge, Altai 691
Snow-Partridge, Caspian 689
Snow-Partridge, Caucasian 688
Snow-Partridge, Himalayan 690
Snow-Partridge, Tibetan 690
Snow-Pheasant, Harman's 673
Snow-Pheasant, Manchurian 672
Snow-Pheasant, Pallas's 672
Snow-Pheasant, Tibetan 671
Snow-Pheasant, White-tailed 671
Sparrow, Afghan 291
Sparrow, Desert 294
Sparrow, Desert Rock 296
Sparrow, House 289
Sparrow, Italian 290
Sparrow, Rock 295
Sparrow, Russett 293
Sparrow, Saxaul 292
Sparrow, Spanish 291
Sparrow, Tree 293
Sparrow, Yellow-throated 297
Sparrow-Hawk 531
Sparrow-Hawk, Besra 532
Sparrow-Hawk, Levant 531
Spoonbill 582
Spoonbill, Black-faced 583
Starling 399
Starling, Daurian 403
Starling, Grey 402
Starling, Purple-winged 400
Starling, Red-cheeked 404
Starling, Rose-coloured 401
Starling, Sardinian 401
Stilt, Black-winged 753
Stint, American 772
Stint, Eastern Little 771
Stint, Little 770
Stint, Long-toed 772
Stint, Temminck's 773
Stock-Dove 642
Stock-Dove, Indian 642
Stonechat 45
Stonechat, Indian 46
Stonechat, Moussier's 48
Stonechat, Pied 47
Stonechat, White-tailed 47
Stork, Black 581
Stork, Japanese 581
Stork, White 580
Suthora, Chinese 185
Suthora, Grey-crowned 186
Suthora, Spectacled 185

PAGE
Swallow 264
Swallow, Red-rumped 267
Swamp Robin 5
Swan, Bewick's 600
Swan, Mute 598
Swan, Whooper 599
Swift 427
Swift, Alpine 430
Swift, Madeiran 429
Swift, Needle-tailed 431
Swift, Pallid 428
Swift, Siberian 430
Swift, White-rumped 429

Teal 611
Teal, American 612
Teal, Baikal 612
Teal, Blue-winged 610
Teal, Falcated 608
Tern, Aleutian 817
Tern, Allied 811
Tern, Arctic 808
Tern, Asiatic Little 816
Tern, Black 805
Tern, Caspian 813
Tern, Common 809
Tern, Gull-billed 814
Tern, Little 815
Tern, Nordmann's 810
Tern, Panayan 818
Tern, Roseate 810
Tern, Royal 814
Tern, Sandwich 812
Tern, Sooty 818
Tern, Whiskered 807
Tern, White-winged Black 806
Thrush, Black-throated 14
Thrush, Blue 22
Thrush, Dusky 7
Thrush, Elliot's Laughing 147
Thrush, Gould's 10
Thrush, Grey-cheeked 5
Thrush, Grey Japanese 18
Thrush, Hermit 4
Thrush, Himalayan Whistling 883
Thrush, Japanese Brown 12
Thrush, Kessler's 11
Thrush, Mistle 15
Thrush, Mistletoe 1
Thrush, Mongolian Song 3
Thrush, Pale 15
Thrush, Red-throated 14
Thrush, Rock 21
Thrush, Siberian 19
Thrush, Solitary 23
Thrush, Song 2
Thrush, Swainson's 4
Thrush, Swinhoe's 12

PAGE
Thrush, White's 16
Titlark 210
Titmouse, Algerian Blue 178
Titmouse, Algerian Coal 166
Titmouse, Azure 175
Titmouse, Black-crested 182
Titmouse, Blue 177
Titmouse, Coal 164
Titmouse, Crested 180
Titmouse, Great 161
Titmouse, Himalayan Crested 181
Titmouse, Indian Grey 163
Titmouse, Japanese 162
Titmouse, Long-tailed 157
Titmouse, Marsh 167
Titmouse, Mongolian Crested 182
Titmouse, Mongolian Long-tailed 161
Titmouse, Mongolian Marsh 170
Titmouse, Northern Marsh 168
Titmouse, Penduline 183
Titmouse, Persian Coal 166
Titmouse, Red-bellied 174
Titmouse, Siberian 172
Titmouse, Sombre 171
Titmouse, Songaran Marsh 170
Titmouse, Turkish Long-tailed 160
Titmouse, Varied 174
Titmouse, White-browed 173
Titmouse, Yellow-breasted 176
Tree-Creeper 192
Tree-Creeper, Himalayan 194
Turnstone 750
Turtle-Dove 646
Turtle-Dove, Chinese 648
Turtle-Dove, Collared 649
Turtle-Dove, Eversmann's 648
Turtle-Dove, Indian Brown 650
Turtle-Dove, Isabelline 647
Turtle-Dove, Red 651
Turtle-Dove, Senegal 650
Turtle-Dove, Surat 651
Twite 313

Vulture, Bearded 502
Vulture, Black 500
Vulture, Egyptian 501
Vulture, Griffon 499

Wagtail, Black-headed 207
Wagtail, Blue-headed 205
Wagtail, Eastern Yellow 208
Wagtail, Forest 209
Wagtail, Grey 202
Wagtail, Grey-headed 206
Wagtail, Hodgson's 199
Wagtail, Hodgson's Yellow-headed 204

PAGE
Wagtail, Japanese Pied . . . 198
Wagtail, Large Pied 199
Wagtail, Masked 201
Wagtail, Pied 197
Wagtail, Streak-eyed 202
Wagtail, White 200
Wagtail, White faced . . . 198
Wagtail, White-headed . . . 209
Wagtail, Yellow 208
Wagtail, Yellow-headed . . . 203
Wall-Creeper 194
Warbler, Aquatic 122
Warbler, Armand's 126
Warbler, Barred 73
Warbler, Bonelli's 95
Warbler, Booted 113
Warbler, Bowman's 82
Warbler, Cetti's 137
Warbler, Dartford . . . 81, 87
Warbler, Desert 79
Warbler, Dusky 125
Warbler, Dybowski's 126
Warbler, Eastern Grasshopper . 132
Warbler, Eversmann's . . . 99
Warbler, Fantail 140
Warbler, Garden . . . 74, 78, 85
Warbler, Grasshopper . . . 131
Warbler, Gray's Grasshopper . 135
Warbler, Grey-backed . . . 115
Warbler, Icterine 107
Warbler, Indian Hill 125
Warbler, Lanceolated . . . 132
Warbler, Large-billed, Bush . 129
Warbler, Marmora's 89
Warbler, Marsh- 118
Warbler, Melodious 108
Warbler, Ménétriés' 80
Warbler, Middendorff's Grasshopper 134
Warbler, Moustached . . . 128
Warbler, Olivaceous 110
Warbler, Olive-tree 109
Warbler, Orphean 85, 86
Warbler, Paddy-field 115
Warbler, Palestine 87
Warbler, Pallas's Grasshopper . 133
Warbler, Prjevalsky's Crested . 91
Warbler, Radde's 127
Warbler, Reed 79, 85, 117
Warbler, River 135
Warbler, Rufous 114
Warbler, Rüppell's 86
Warbler, Sardinian 83
Warbler, Savi's 136
Warbler, Sedge 123
Warbler, Severtzoff's 90
Warbler, Spectacled 80
Warbler, Spotted-Bush . . . 128

PAGE
Warbler, Subalpine 81
Warbler, Sykes's 112
Warbler, Taczanowski's . . . 130
Warbler, Thick-billed . . . 124
Warbler, Tristram's 88
Warbler, Upcher's 111
Warbler, Western Olivaceous . 110
Warbler, Yellow-browed . . 104
Water-Rail 704
Waxwing 249
Waxwing, Japanese 250
Wheatear 29
Wheatear, Arabian 38
Wheatear, Black 35
Wheatear, Black and White . 33
Wheatear, Black-eared . . . 37
Wheatear, Black-throated . . 37
Wheatear, Desert 39
Wheatear, Eastern Pied . . . 32
Wheatear, Ehrenberg's . . . 30
Wheatear, Hooded 32
Wheatear, Indian Pied . . . 33
Wheatear, Isabelline 41
Wheatear, Mourning 42
Wheatear, Pied 31
Wheatear, Red-rumped . . . 40
Wheatear, Red-tailed . . . 43
Wheatear, Russet 36
Wheatear, Seebohm's 30
Wheatear, Strickland's . . . 36
Wheatear, White-headed . 34
Wheatear, White-rumped . . 34
Whimbrel 801
Whimbrel, Little 800
Whinchat 43
White-eye, Chinese 221
White-eye, Japanese 221
Whitethroat 74, 79, 80, 82
Whitethroat, Himalayan . . 75
Whitethroat, Least 77
Whitethroat, Lesser 76
Whitethroat, Siberian . . . 77
Wigeon 614
Wigeon, American 615
Willow-Warbler, Blyth's . . 103
Willow-Warbler, Bright Green. 101
Willow-Warbler, Brooks's . . 107
Willow-Warbler, Greenish . . 101
Willow-Warbler, Large-crowned 106
Willow-Warbler, Large-billed . 103
Willow-Warbler, Middendorff's 102
Willow-Warbler, Pale-legged . 102
Willow-Warbler, Pallas's . . 105
Willow-Warbler, Plain . . . 98
Willow-Warbler, Swinhoe's. . 100
Willow-Warbler, Temminck's . 105
Willow-Warbler, Tickell's . . 99
Willow-Wren 94

PAGE
Woodcock 756
Woodlark 389
Wood-Wren 95
Wood-Owl, Biddulph's . . . 478
Wood-Owl, Himalayan . . . 478
Wood-Pigeon 645
Woodpecker, Algerian Green . 454
Woodpecker, Algerian Pied . 440
Woodpecker, Barred 444
Woodpecker, Brown-fronted . 446
Woodpecker, Caucasian Pied . 439
Woodpecker, Chinese Pied . . 442
Woodpecker, Darjeeling Pied . 442
Woodpecker, Great Black . . 437
Woodpecker, Greek Pied . . 448
Woodpecker, Green 453
Woodpecker, Grey-headed Green 456
Woodpecker, Himalayan Pied . 441
Woodpecker, Japanese Green . 454
Woodpecker, Japanese Pied . 440
Woodpecker, Japanese Pigmy . 451
Woodpecker, Japanese White-backed 448
Woodpecker, Middle-spotted . 449

PAGE
Woodpecker, Moorish Pied . . 441
Woodpecker, Perny's Pied . . 443
Woodpecker, Pied 438
Woodpecker, Richard's . . . 437
Woodpecker, Sharpe's Green . 454
Woodpecker, Sind Pied . . . 443
Woodpecker, Swinhoe's Pigmy . 450
Woodpecker, Syrian Pied . . 444
Woodpecker, Three-toed . . 452
Woodpecker, White-backed . 447
Woodpecker, White-winged . 439
Woodpecker, Yellow-billed Green 455
Wren 195
Wren, Fire-crested 93
Wren, Golden-crested 91
Wren, Japanese 884
Wren, Northern 197
Wren-Warbler, Streaked . . 141
Wren, Wood- 95
Wryneck 457

YELLOWHAMMER 353
Yellowshank 788

GENERAL INDEX

PAGE
ABBOTTI, Cyanecula 62
abyssinica, Galerita 392
abyssinicus, Cypselus 429
Acanthyllis 431
acatoptricus, Tetrao 699
accedens, Parus 169
Accentor 148
Accipiter 531
accipitrinus, Asio 484
Acredula 157
Acrocephalus 115
acuflavida, Sterna 812
acuminata, Tringa 767
acuta, Dafila 613
acutirostris, Calandrella 393
adalberti, Aquila 522
adamsi, Alaudula 396
adamsi, Colymbus 877
adamsi, Montifringilla 299
Adelura 57
Aedon 114
aedon, Lusciniola 124
Ægialitis 734
Ægithalus 183
ægocephala, Limosa 797, 799
ægyptiacus, Turtur 650
ægyptius, Caprimulgus 435
ægyptius, Merops 466
ægyptius, Milvus 537
ægyptius, Pluvianus 744
æruginosus, Circus 503, 507
æsalon, Falco 547
æthereus, Phæton 861
æthiopica, Ibis 584
Æthyia 616
Aex 603
affinis, Corvus 425
affinis, Cypselus 429
affinis, Larus 835
affinis, Ninox 495
affinis, Parus 170
affinis, Phylloscopus 99
affinis, Poecile 91
affinis, Pycnorhamphus 288

PAGE
affinis, Salicaria 128
affinis, Sterna 811
affinis, Sylvia 77
africana, Æthyia 620
africana, Fringilla 309
africana, Strix 498
africana, Turnix 703
africanus, Charadrius 731
africanus, Cypselus 431
africanus, Phalacrocorax 559
agilis, Anthus 212
agricola, Acrocephalus 115
akahige, Erithacus 65
alaschanica, Ruticilla 54
Alauda 387
alaudarius, Falco 552
alaudipes, Certhilauda 375
alba, Ardea 566, 568
alba, Ciconia 580
alba, Motacilla 200
albatrus, Diomedea 859
albatus, Chen 597
albellus, Mergus 638
albescens, Certhia 194
albescens, Chen 598
albescens, Tringa 771
albicans, Aquila 520
albicilla, Haliaetus 524
albicilla, Muscicapa 257
albicollis, Cinclus 26
albicollis, Muscicapa 255
albicollis, Saxicola 37, 885
albidior, Picoides 452
albifrons, Anser 591
albifrons, Sitta 187
albigula, Otocorys 380, 381
albigularis, Saxicola 68
albinigra, Saxicola 33
albipennis, Podicipes 881
albisuperciliaris, Rhopophilus 146
albiventris, Loxia 340
alboides, Motacilla 199
albus, Lagopus 692, 696, 699
albus, Larus 821

PAGE
Alca 861
Alcedo 458
alchata, Pterocles 654
aldrovandi, Scops 486
aleutica, Sterna 817
alexandrina, Ægialitis 737
algeriensis, Ammomanes 397
algeriensis, Lanius 235
algirus, Gecinus 454
aliciæ, Turdus 5, 6
alle, Mergulus 864
alleni, Lagopus 692
alleni, Porphyrio 714
alpestris, Hirundo 268
alpestris, Otocorys 378
alpestris, Parus 168
alpestris, Turdus 20
alpicola, Montifringilla 298
alpina, Tringa 769, 770
alpinus, Accentor 148
alpinus, Cypselus 430
alpinus, Pyrrhocorax 406
alpinus, Tetrao 693
Alseonax 252
altaica, Fringalauda 302
altaicus, Accentor 150
altaicus, Falco 542
altaicus, Tetraogallus 691
althæa, Sylvia 75
alticola, Certhia 194
Aluco 497
aluco, Strix 476
amaurotis, Hypsipetes 226
ambiguus, Carpodacus 328
americana, Æthyia 617
americana, Certhia 193
americana, Clangula 621
americana, Fulica 717
americana, Mareca 614
americana, Œdemia 628
americana, Tringa 770
americanus, Coccyzus 474
americanus, Lanius 231
americanus, Otus 484
amherstiæ, Chrysolophus 669
ammodendri, Passer 292
Ammomanes 397
Ammoperdix 680
ampelinus, Hypocolius 250
Ampelis 249
amphileuca, Saxicola 885
amurensis, Aquila 519
amurensis, Ardetta 575
amurensis, Falco 551
amurensis, Motacilla 198
amurensis, Sitta 187
anæstheta, Sterna 818
Anas 604

PAGE
anatum, Falco 544
andalusica, Turnix 703
anglica, Sterna 814
anglorum, Puffinus 849
angustirostris, Marmaronetta 607
angustirostris, Phalaropus 754
Anous 819
Anser 588
Anthus 210
antigone, Grus 721
antiquorum, Phœnicopterus 587
antiquus, Synthliborhamphus 868
aphrodite, Parus 162
apiaster, Merops 465
apivorus, Pernis 538
apus, Cypselus 427
aquaticus, Acrocephalus 122
aquaticus, Anthus 214, 216
aquaticus, Cinclus 25
aquaticus, Rallus 704
Aquila 517
aquilinus, Buteo 511
aquilus, Tachypetes 861
arabs, Eupodotis 726
aralensis, Sylvia 79
aranea, Sterna 815
arborea, Alauda 389
arboreus, Anthus 211
arcadica, Strix 493
arcadicus, Falco 549
Archibuteo 514
arctica, Fratercula 873
arctica, Sterna 808
arctica, Strix 480
arcticus, Colymbus 875
arcticus, Puffinus 849
arctoa, Leucosticte 303
arcuata, Emberiza 361
Ardea 564
Ardetta 575
arenaria, Calidris 779
arenarius, Caccabis 678
arenarius, Caprimulgus 436
arenarius, Lanius 238
arenarius, Pterocles 652
arenicola, Galerita 391
arenicolor, Ammomanes 398
arenicolor, Caprimulgus 435
argentatus, Larus 832
Argya 144
ariel, Prion 861
armandi, Lusciniola 126
arquatus, Numenius 803
arra, Alca 863
arundinaceus, Acrocephalus 117, 119
arvensis, Alauda 387
ascalaphus, Bubo 492
asiatica, Ægialitis 736

PAGE
asiatica, Sitta 187
asiaticus, Cinclus 27
Asio 483
assimilis, Lanius 232
assimilis, Parus 169
assimilis, Puffinus 854
Astur 529
ater, Milvus 535
ater, Parus 164
Athene 496
atlas, Otocorys 381
atlas, Parus 885
atra, Fulica 716
atricapilla, Halcyon 462
atricapilla, Muscicapa 254
atricapilla, Sylvia 84
atricapillus, Ægithalus 184
atricapillus, Astur 530
atricapillus, Garrulus 413
atriceps, Parus 163
atricollis, Ardea 566
atrigularis, Accentor 152
atrigularis, Turdus 14
atrogularis, Saxicola 39
audouini, Larus 831
auduboni, Puffinus 854
auduboni, Turdus 5
aurantiaca, Pyrrhula 338
aurantiiventris, Ligurinus 284
auratus, Charadrius 731
aurea, Oreocincla 16
aureola, Emberiza 349
auricapillus, Regulus 91
auricapillus, Siurus 222
auriceps, Dendrocopus 446
auriculatus, Lanius 246
aurifrons, Serinus 281
aurita, Saxicola 37
auritum, Crossoptilum 672
auritus, Podicipes 879, 880
auritus, Turdus 3
auritus, Turtur 647
aurorea, Ruticilla 52
australasiana, Grus 720
australis, Alauda 389
australis, Cypselus 430
australis, Gallinago 762
australis, Numenius 804
australis, Podicipes 877
australis, Tringa 767
autumnalis, Plegadis 586
avicula, Locustella 131
avocetta, Recurvirostra 752
awokera, Gecinus 454
azoricus, Regulus 92

BABYLONICUS, Falco 546
bacchus, Ardea 572

PAGE
bactriana, Athene 497
bactriana, Pica 417
badius, Astur 530
bæri, Æthyia 621
bætica, Calandrella 395
baicalensis, Cinclus 26
baicalensis, Motacilla 201
baicalensis, Parus 169
baicalensis, Sitta 187
bailloni, Calliope 67
bailloni, Porzana 707
bairdi, Tringa 767
bakkamœna, Scops 488
balearica, Loxia 340
barbarus, Falco 546
barbata, Strix 479
barbatus, Bubo 492
barbatus, Gypaetus 502
barbatus, Pycnonotus 222
barnesi, Saxicola 39
baroli, Puffinus 850
barrovianus, Larus 837
barrovii, Clangula 622
barthelemyi, Aquila 522
bartletti, Cuculus 471
Bartramia 782
bartramia, Tringa 783
bassana, Sula 561
baueri, Limosa 798
beavani, Lophophanes 181
bechsteini, Turdus 14, 19
beema, Motacilla 206
behringianus, Corvus 424
belgica, Limosa 798
bella, Linota 313
bendirei, Loxia 340
bengalensis, Alcedo 458
bengalensis, Bubo 492
bengalensis, Coracias 463
bengalensis, Rostratula 757
bengalensis, Sterna 811
berezovskii, Parus 176
berezowskyi, Phasianus 663
bergensis, Troglodytes 196
bernicla, Branta 594
bertheloti, Anthus 211
betulina, Bonasia 700
bewicki, Cygnus 600
biarmicus, Panurus 156
bicalcaratus, Francolinus 682
bicknelli, Turdus 6
bicornis, Otocorys 382
bicristatus, Phalacrocorax 557
biddulphi, Podoces 408
biddulphi, Strix 478
bifasciata, Aquila 519
bifasciata, Certhilauda 375
bifasciata, Loxia 341, 343

PAGE
bilkevitchi, Cinclus 885
bilopha, Otocorys 380
bimaculata, Melanocorypha . . 384
bispecularis, Garrulus . . . 415
bistrigiceps, Acrocephalus . . 121
blakistoni, Alauda 387
blakistoni, Anthus 215
blakistoni, Arundinax . . . 134
blakistoni, Bubo 491
blakistoni, Chelidon 271
blakistoni, Motacilla 198
blanfordi, Montifringilla . . . 301
blanfordi, Turnix 704
blythi, Propasser 327
boarula, Motacilla 202
boecki, Aquila 518
bogdanovi, Lanius 244
bogolubovi, Cursorius 730
bokharensis, Parus 163
bollii, Columba 644
bonapartii, Larus 826
bonapartii, Tringa 768
bonasia, Tetrastes . . . 699, 700
bonellii, Hieraetus 516
bonellii, Phylloscopus . . . 96
bonhami, Ammoperdix . . . 680
borealis, Lanius 231
borealis, Motacilla 206
borealis, Numenius 800
borealis, Parus 168, 169
borealis, Phylloscopus . . . 99
borealis, Puffinus 852
borealis, Somateria 631
borealis, Troglodytes 197
boscas, Anas 604
Botaurus 578
bottanensis, Pica 417
bowmani, Sylvia 82
boyciana, Ciconia 581
brachydactyla, Calandrella . . 393
brachydactyla, Certhia . . . 193
brachydactyla, Petronia . . . 296
brachydactylus, Circaetus . . 527
brachydactylus, Lagopus . . 692
brachyotus, Asio 484
Brachyrhamphus 867
brachyrhynchus, Anser . . . 591
brachyrhynchus, Larus . 823, 830
brachyura, Diomedea 859
brachyurus, Lanius. 242
brandti, Garrulus 413
brandti, Leucosticte 303
brandti, Otocorys 380
brandti, Phasianus. 665
branickii, Haliaetus 526
Branta 594
brehmi, Phylloscopus 98
brenta, Branta 594

PAGE
brevicaudus, Puffinus 853
brevipes, Astur 531
brevipes, Limosa 799
brevipes, Œstrelata 856
brevipes, Totanus 793
brevirostris, Brachyrhamphus . 868
brevirostris, Linota 314
brevirostris, Parus 168
brevirostris, Pericrocotus . . 263
brevirostris, Petronia 295
brevirostris, Rissa 823
britannica, Certhia 193
britannicus, Parus 165
brodiei, Glaucidium 494
brookei, Falco 545
brucii, Scops 488
bruennichi, Alca 863
bruniceps, Emberiza 347
brunnea, Larvivora 70
brunneicephalus, Larus . . . 825
brunneiceps, Cisticola . . . 140
brunneinucha, Leucosticte . . 305
brunnescens, Acrocephalus . . 120
brunnifrons, Dendrocopus . . 446
Bubo 489
bubo, Strix 489
bubulcus, Ardea 569
Bucanetes 330
buccinator, Cygnus 600
bucephalus, Lanius. 242
buchanani, Emberiza 357
buffoni, Stercorarius 842
bulweri, Bulweria 857
Bulweria 857
burmanica, Ninox 495
Butastur 513
Buteo 509
buteo, Falco 509

CABANISI, Dendrocopus . . . 442
Caccabis 677
cachinnans, Larus . . . 833, 834
cachinnans, Saxicola 35
cælebs, Fringilla 306
cælestis, Gallinago 759
cælicolor, Grandala 61
cælivox, Alauda 389
cærulecula, Cyanecula . . . 62
cærulescens, Fringilla 309
cæruleus, Elanus 537
cæruleus, Myiophoneus . . . 883
cæruleus, Parus 177
cæruleus, Porphyri 712
cærulocephala, Ruticilla . . . 57
cæsia, Emberiza 358
cæsia, Sitta 188
caffer, Cypselus 429
cahirica, Hirundo 266

PAGE
cairii, Ruticilla 54, 55
calandra, Melanocorypha 382
Calandrella 393
calcaratus, Budytes 204
calcaratus, Calcarius 373
Calcarius 372
Calidris 779
calidris, Totanus 783
californica, Uria 862
caligata, Hypolais 113
Calliope 65
calliope, Erithacus 65
calonyx, Eurystomus 464
calva, Acredula 161
calvus, Ibis 586
cambayensis, Turtur 650
campbelli, Turdus 12
campestris, Anthus 218
campestris, Motacilla 208
campestris, Tetrax 725
camtschatica, Motacilla 198
camtschatica, Pica 418
camtschatika, Sterna 810
camtschatkensis, Calliope 65, 66
camtschatkensis, Parus 169, 170
canadensis, Aquila 522
canadensis, Grus 720
canadensis, Pinicola 339
canadensis, Sitta 191
canadensis, Tetrao 700
canagica, Chen 598
canariensis, Asio 886
canariensis, Calandrella 395
canariensis, Falco 552
canariensis, Fringilla 307
canarius, Serinus 281
candicans, Falco 540
candidissima, Ardea 569
candidissimus, Astur 530
candidus, Himantopus 753
canescens, Linota 315
canescens, Totanus 786
caniceps, Carduelis 275
caniceps, Emberiza 367
caniceps, Lanius 245
cannabina, Linota 312
canonicus, Serinus 281
canorus Cuculus 468
cantans, Cettia 139
cantarella, Alauda 387
cantiaca, Sterna 812
cantiana, Ægialitis 737
cantillans, Cettia 139
canturians, Cettia 138
canus, Gecinus 456
canus, Larus 829
canutus, Tringa 775
caparoch, Surnia 482

PAGE
capella, Vanellus 749
capellanus, Corvus 422
capensis, Asio 485
capensis, Coturnix 685
capensis, Daption 861
capensis, Podicipes 881
capensis, Pycnonotus 223
capensis, Rostratula 757
capillatus, Phalacrocorax 556
capistrata, Saxicola 34
capistratus, Larus 824
caprata, Pratincola 47
Caprimulgus 432
carbo, Œdemia 627
carbo, Phalacrocorax 555
carbo, Uria 866
carboides, Phalacrocorax 555
cardis, Turdus 12, 18
Carduelis 274
carduelis, Fringilla 274
cariceti, Acrocephalus 122
carneipes, Puffinus 853
carneipes, Pycnorhamphus 288
carnivorus, Corvus 423
carolinæ, Galerita 391
carolinense, Nettion 612
carolinensis, Pandion 554
Carpodacus 319
caryocatactes, Nucifraga 409
casarca, Tadorna 602
cashmiriensis, Chelidon 270
cashmiriensis, Cinclus 26
casiotis, Columba 646
caspia, Ægialitis 736
caspia, Sterna 813
caspius, Ægithalus 184
caspius, Tetraogallus 689
cassini, Pyrrhula 336
cassinii, Asio 484
castanea, Pucrasia 670
castaneiceps, Emberiza 365
castaneus, Ægithalus 184
castor, Mergus 635
castro, Oceanodroma 845
catarinæ, Saxicola 38
catarrhactes, Stercorarius, Linn 839
caucasica, Acredula 159
caucasicus, Coccothraustes 319
caucasicus, Sturnus 400
caucasicus, Tetraogallus 688
caudacuta, Acanthyllis 431
caudacuta, Dafila 613
caudata, Acredula 157, 158
caudata, Argya 145
caudata, Pica 417
caudatus, Uragus 332
cayennensis, Sterna 814
cenchris, Falco 553

PAGE
cenchroides, Astur 530
Cerorhyncha 871
cerrutii, Emberiza 357
Certhia 192
Certhilauda 375
certhiola, Locustella 133
cervicalis, Garrulus 414
cervinus, Anthus 213
Ceryle 459
Cettia 137
cettii, Cettia 137
chalybeus, Crateropus 144
Charadrius 731
Chaulelasmus 605
cheleensis, Calandrella 395
Chelidon 269
Chen 597
cherrug, Falco 543
Chettusia 745
Chimarrhornis 60
chinensis, Hirundo 272
chloris, Ligurinus 283
chloronotus, Phylloscopus . . . 105
chloronotus, Porphyrio 713
chloronotus, Zosterops 221
chloropus, Gallinula 715
chloropygius, Totanus 790
chlorotica, Chloris 283
chrysaetus, Aquila 522
chrysolaus, Turdus 12
Chrysolophus 668
chrysomelas, Phasianus 662
Chrysomitris 276
chrysophrys, Emberiza 356
chrysophthalmus, Sylvia 79
chrysopleurus, Turdus 12
chrysopygia, Saxicola 43, 885
chucar, Caccabis 678
cia, Emberiza 368
Ciconia 580
Cinclus 24
cinclus, Tringa 769
cinctura, Ammomanes 398
cinctus, Parus 172
cineracea, Pyrrhula 336
cineraceus, Circus 505, 507
cineraceus, Spodiopsar 402
cinerarius, Circus 505
cinerascens, Circus 505
cinerascens, Hypolais 110
cinerea, Ardea 564
cinerea, Emberiza 352
cinerea, Grus 717
cinerea, Perdix 682
cinerea, Strix 479
cinerea, Sylvia 74
cinerea, Terekia 794
cinereo-alba, Muscicapa 252

PAGE
cinereocapilla, Motacilla 206
cinereus, Anser 588
cinereus, Lobivanellus 748
cinereus, Parus 163
cinereus, Pericrocotus 263
cinereus, Phalaropus 754
cinereus, Puffinus 851, 852
cinereus, Vultur 500
cinnamomea, Ardetta . . . 577, 578
cioides, Emberiza 364, 365
ciopsis, Emberiza 365
Circaetus 527
circia, Querquedula 609
Circus 503
cirlus, Emberiza 354
cirrhata, Lunda 872
cirris, Dendrocopus 447
cirtenis, Buteo 511
cisalpina, Passer 290
cissa, Dendrocopus 438
Cisticola 140
cisticola, Cisticola 140
cisticola, Salicaria 140
citreola, Motacilla 203
citreoloides, Motacilla 204
citrinella, Chrysomitris. . 278, 279
citrinella, Emberiza 353
clanga, Aquila 517
Clangula 621
clangula, Anas 621
clara, Sitta 188
clara, Sylvia 885
clotbey, Rhamphocorys 377
clypeata, Spatula 606
coburni, Turdus 885
Coccothraustes 287
coccothraustes, Loxia 287
Coccystes 472
Coccyzus 474
colchicus, Phasianus . 658, 696, 699
collaris, Accentor 148
collaris, Corvus 419
collaris, Grus 721
collaris, Muscicapa 255
collaris, Strepsilas 750
colletti, Parus 169
collurio, Lanius 237
collybita, Phylloscopus 97
Columba 639
columba, Uria 866
columbianus, Cygnus 601
columbina, Bulweria 857
columbinus, Larus 830
Colymbus. 874
comata, Ardea 571
comata, Ibis 586
comatus, Mergus 635
communis, Coturnix 685

PAGE
communis, Falco 544
communis, Grus 717
communis, Parus 168
communis, Turtur 646
consobrinus, Ægithalus . . . 183
conspicillata, Suthora . . . 185
conspicillata, Sylvia 80
cooki, Cyanopica 416
Coracias 462
corax, Corvus 423
cormoranus, Phalacrocorax . . 555
corniculata, Fratercula . . . 873
cornix, Corvus 421
cornuta, Tadorna 601
cornutus, Podicipes 879
coromanda, Ardea 570
coromandus, Halcyon 460
coronata, Dendrœca 222
coronatus, Ægithalus 184
coronatus, Phylloscopus . . . 105
coronatus, Pterocles 653
corone, Corvus 421
corsicana, Chrysomitris . . . 279
corsus, Parus 885
Corvus 419
Corydus 390
Cosmonetta 624
Cossypha 68
Cotile 271
Coturnix 685
coturnix, Tetrao 685
couesi, Tringa 777
crassipes, Aquila 521
crassirostris, Larus 832
crassirostris, Parus 168
crassirostris, Tringa 776
crecca, Nettion 611
crepidatus, Stercorarius . . 841, 842
crepitans, Œdicnemus . . . 727
Crex 711
crex, Rallus 711
crispus, Pelecanus 563
crissoleucus, Picoides 452
cristata, Æthyia 619
cristata, Fulica 717
cristata, Galerita 391
cristatellus, Simorhynchus . . 869
cristatus, Corydus 390
cristatus, Lanius 240
cristatus, Lophophanes . . . 180
cristatus, Phalacrocorax . . . 558
cristatus, Podicipes 877
cristatus, Regulus 91
cristatus, Vanellus 749
Crossoptilum 671
cruentatus, Dendrocopus . . 444
cruentus, Ithagenes 675
cryptoleucura, Oceanodroma . 845

PAGE
cucullata, Ægithalus 184
cucullatus, Mergus 637
cucullatus, Telephonus . . . 248
Cuculus 468
culminatus, Corvus 422
culminatus, Thalassogeron . . 860
cummingi, Saxicola 41
curonica, Ægialitis 740
curruca, Sylvia 76, 77
cursitans, Cisticola 140
Cursorius 730
curvirostra, Loxia 339
cuvieri, Falco 549
cyana, Cyanopica 416
cyane, Larvivora 70
Cyanecula 61
cyanecula, Sylvia 61, 62
cyaneus, Circus 507
cyanomelæna, Cyanoptila . . 258
Cyanopica 416
Cyanoptila 258
cyanopus, Falco 543
cyanopus, Numenius 804
cyanura, Nemura 69
cyanus, Monticola 22
cyanus, Parus 175
cygnoides, Anser 593
Cygnus 598
cypria, Scops 487
cypriotes, Parus 165
cyprius, Scops 487
Cypselus 427

DACOTIÆ, Pratincola 44
Dafila 613
dahuricus, Accentor 153
damascena, Perdix 682
damacensis, Tringa . . . 771, 772
danfordi, Dendrocopus . . . 446
darjilensis, Dendrocopus . . . 442
dartfordiensis, Sylvia 87
dasypus, Chelidon 271
dasypus, Nyctala 482
Daulias 71
daulias, Turdus 15
daurica, Hirundo 268
daurica, Perdix 683
daurica, Sturnia 403
dauricus, Troglodytes . . . 884
dauuricus, Corvus 419
davidi, Cygnus 601
davidi, Parus 174
davidi, Pterorhinus 147
davidiana, Montifringilla . . 301
davidianus, Carpodacus . . . 325
davidii, Lusciniola 126
dealbatus, Lanius 232

PAGE
decaocto, Turtur 649
decollatus, Phasianus 663
deichleri, Galerita 391
delicata, Gallinago 761
delicatula, Strix 498
delicatula, Sylvia 79
Dendrocopus 438
derogata, Diomedea 859
deserti, Ammomanes 397
deserti, Rhopophilus 146
deserti, Saxicola 39
deserti, Sylvia 79
deserticola, Melizophilus 88
desertorum, Bubo 492
desertorum, Buteo 509, 511
desertorum, Caprimulgus 434
desertorum, Certhilauda 375
desgodinsi, Tetraophasis 687
desmaresti, Phalacrocorax 558
desmursi, Dendrocopus 442
dichroides, Lophophanes 182
dichrourus, Lanius 244
dichrous, Falco 549
dichrous, Lophophanes 182
diffusus, Oriolus 228
diluta, Otocorys 382
Diomedea 859
discessa, Cyanecula 885
discors, Querquedula 610
dispar, Anas 630
doerriesi, Iyngipicus 451
domesticus, Passer 289
dominicana, Sturnia 404
dominicus, Charadrius 732
doriæ, Sylvia 79
dorrandti, Phasianus 662
dorriesi, Bubo 491
dorsalis, Acredula 159
dougalli, Sterna 810
douraca, Turtur 649
dresseri, Parus 167, 168
dresseri, Somateria 631
drouynii, Crossoptilum 671
dubia, Ægialitis 740
dubius, Carpodacus 327
dubius, Turdus 7
dukhunensis, Calandrella 393
dukhunensis, Motacilla 200
dumetorum, Acrocephalus 116
duponti, Certhilauda 376
dussumieri, Astur 530
dybowskii, Acrocephalus 134
dybowskii, Otis 724

EBURNEA, Pagophila 821
eclipes, Argya 145
edwardsi, Carpodacus 326
egretta, Ardea 566

PAGE
ekloni, Sitta 191
elaica, Hypolais 110
Elanus 537
eléagni, Lanius 244
elegans, Ammomanes 398
elegans, Carduelis 274
elegans, Emberiza 355
elegans, Lanius 232
elegans, Lophobasileus 91
eleonoræ, Falco 549
ellioti, Galerita 391
ellioti, Pterocles 656
ellioti, Trochalopterum 147
elwesi, Otocorys 379
Emberiza 343
enucleator, Pinicola 338
Eophona 285
epops, Upupa 467
eremita, Ibis 586
eremita, Pyrrhocorax 405
Erismatura 634
Erithacus 63
erithacus, Pyrrhula 337
erlangeri, Falco 547
ernesti, Strix 886
erythræa, Saxicola 31, 38
erythrinus, Carpodacus 321
erythrocephala, Pyrrhula 338
erythrogastra, Hirundo 266
erythrogastra, Ruticilla 53
erythronota, Ruticilla 53, 54
erythronotus, Lanius 245
erythrophthalmus, Coccyzus 475
erythropleura, Zosterops 221
erythroprocta, Ruticilla 55
erythropterus, Lanius 248
erythropus, Anser 592
erythropygia, Saxicola 40
erythropygius, Accentor 149
Erythrospiza 328
erythrothorax, Porzana 710
Eudromias 743
Eunetta 608
europæa, Bonasia 700
europæa, Pyrrhula 333
europæa, Sitta 186, 188
europæus, Caprimulgus 432
europæus, Cursorius 730
europæus, Lanius 231
europæus, Nycticorax 573
europæus, Troglodytes 195
eurymelæna, Saxicola 37
Eurynorhynchus 780
Eurystomus 464
eurythma, Ardetta 578
eversmanni, Columba 642
excubitor, Lanius 228
exilipes, Linota 317

PAGE
exquisita, Porzana 709
exulans, Diomedea 860
exustus, Pterocles 656

Fabalis, Anser 589
færoensis, Sturnus 399
falcata, Eunetta 608
falcinellus, Plegadis 586
falcipennis, Tetrao 700
Falco 539
fallax, Lanius 234
familiaris, Aedon 115
familiaris, Certhia 192, 193
fasciatus, Hieraetus 516
fasciolata, Locustella 135
feldeggi, Falco 546
feldeggi, Motacilla 207
feliciæ, Dendrocopus 444
ferina, Æthyia 617
ferox, Buteo 511, 512
ferrago, Turtur 648
ferruginea, Æthyia 620
ferruginea, Tringa 774
ferus, Anser 588
ferus, Cygnus 599
fervidus, Accentor 155
filamentosus, Phalacrocorax 556
filoti, Irania 68
finschi, Saxicola 38
fischeri, Œstrelata 857
fischeri, Somateria 633
fissipes, Hydrochelidon 806
fissipes, Sterna 805
flammeus, Aluco 497, 886
flava, Motacilla 205
flavicapillus, Regulus 91
flavicollis, Petronia 297
flavipectus, Parus 176
flavipes, Totanus 788
flavipes, Vanellus 746
flavirostris, Gecinus 455
flavirostris, Linota 313
fluviatilis, Hydrochelidon 807
fluviatilis, Locustella 135
fluviatilis, Podicipes 881
fluviatilis, Sterna 809
formosum, Nettion 612
forskahli, Milvus 537
Francolinus 681
francolinus, Tetrao 681
franklini, Tetrao 700
Fratercula 873
fratercula, Mormon 873
fraterculus, Ammomanes 397
fraterculus, Grus 720
Fringalauda 302
Fringilla 306
fringillarius, Accipiter 531

PAGE
fringillirostris, Linota 313
frontalis, Ruticilla 58
frugilegus, Corvus 426
fucata, Emberiza 360
fugax, Hierococcyx 474
Fulica 716
fulicarius, Phalaropus 755
fuliginosa, Hemichelidon 251
fuliginosa, Oceanodroma 846
fuliginosa, Sterna 818
fuliginosus, Puffinus 851
fuliginosus, Rhyacornis 58
fuligula, Æthyia 619
Fulmarus 858
fulva, Aquila 522
fulva, Argya 144
fulvescens, Accentor 153
fulvescens, Aquila 518
fulvescens, Gyps 499
fulvicapillus, Regulus 91
fulvus, Charadrius 732
fulvus, Gyps 499
fumigatus, Troglodytes 884
funerea, Surnia 481, 482
funereus, Lanius 232
furcata, Oceanodroma 847
furcata, Strix 498
fusca, Columba 642
fusca, Halcyon 461
fusca, Œdemia 626
fusca, Porzana 710
fuscata, Lusciniola 125
fuscatus, Turdus 7
fuscescens, Strix 477
fuscicollis, Tringa 768
fuscipilea, Sylvia 74, 75
fuscus, Larus 834
fuscus, Totanus 784

Gabor, Melierax 534
galactodes, Aedon 68, 114
galapagoensis, Asio 484
galbula, Oriolus 226
galeata, Gallinula 716
galericulata, Aex 603
galilejensis, Cypselus 429
gallicus, Circaetus 527
gallicus, Cursorius 730
Gallinago 758
gallinago, Scolopax 760
Gallinula 715
gallinula, Gallinago 763
gambelli, Anser 592
garrula, Sylvia 76
Garrulus 411
garrulus, Ampelis 249
garrulus, Coracias 462
garzetta, Ardea 568

PAGE
gebleri, Fringilla 303
Gecinus 453
gelastes, Larus 830
gelastes, Turtur 648
geoffroyi, Ægialitis 735
geoffroyi, Ithagenes 675, 676
gigliolii, Leucosticte 304
ginginianus, Acridotheres 404
ginginianus, Neophron 502
githaginea, Erythrospiza 329
giu, Scops 486
glacialis, Colymbus 876
glacialis, Fratercula 873
glacialis, Fulmarus 858
glacialis, Harelda 625
glandarius, Coccystes 472
glandarius, Garrulus 411
Glareola 728
glareola, Totanus 790
glaszneri, Garrulus 886
glaucescens, Larus 838
Glaucidium 493
glaucion, Clangula 621
glaucogularis, Acredula 161
glaucus, Larus 837
glaux, Athene 496
glocitans, Anas 612
glottis, Totanus 786
glupischa, Fulmarus 858
godlewskii, Anthus 221
godlewskii, Emberiza 369
goensis, Lobivanellus 747
goisagi, Gorsachius 574
golzii, Lusciola 72
gorii, Gecinus 455
Gorsachius 574
gouldii, Dendrocopus 440
gouldi, Turdus 10
gracilis, Prinia 141
gracilis, Saxicola 32
gracilis, Sterna 810
graculus, Phalacrocorax 555
graculus, Pyrrhocorax 405
græca, Caccabis 677
Grandala 61
grandis, Anser 590
grandis, Carpodacus 324
grandis, Ruticilla 53
granti, Accipiter 531
gravis, Puffinus 851
grayi, Ardea 572
grebnitskii, Carpodacus 321
grebnitzkii, Hierofalco 542
gregaria, Chettusia 745
grimmi, Lanius 233
griseigena, Podicipes 878
griseiventris, Pyrrhula 335
griseiventris, Tetrastes 701

PAGE
griseogularis, Ammoperdix 680
griseonucha, Leucosticte 304
griseopygius, Totanus 793
griseorufescens, Anthus 220
grisescens, Parus 173
griseus, Macrorhamphus 795
griseus, Nycticorax 573
griseus, Puffinus 851
grisola, Muscicapa 253
Grus 717
grus, Ardea 718
grylle, Uria 864
guillemardi, Loxia 886
gularis, Accipiter 532
gularis, Monticola 22
gulgula, Alauda 389
gurneyi, Astur 531
gustavi, Anthus 217
guttata, Alauda 387
guttata, Ceryle 460
guttatus, Pterocles 655
guttifer, Totanus 787
gutturalis, Cossypha 68
gutturalis, Hirundo 265
gymnocyclus, Columba 640
gymnopodus, Scops 487
Gypaetus 502
Gyps 499
gyrfalco, Falco 539

HÆMATOPUS 751
hæmatopygia, Fringilla 303
hæsitata, Œstrelata 855
hafizi, Daulias 72
hagenbecki, Phasianus 666
Halcyon 460
Haliaetus 523
haliaëtus, Pandion 554
halophila, Saxicola 885
hardwickii, Lanius 237
Harelda 625
harmani, Crossoptilum 673
harterti, Galerita 391
hartingi, Ægialitis 739
hartlaubi, Falcipennis 700
haughtoni, Totanus 787
heinei, Calandrella 395
heinekeni, Sylvia 85
heliaca, Aquila 521
helvetica, Squatarola 733
Hemichelidon 251
hemilasius, Buteo 511
hemileucurus, Lanius 232
hemiptilopus, Archibuteo 515
hemispila, Nucifraga 410
hemprichi, Pratincola 47
hendersoni, Falco 544

PAGE
hendersoni, Locustella 132
hendersoni, Podoces 408
hendersoni, Saxicola 32
hensoni, Parus 168
hepaticus, Cuculus 468
hermonensis, Calandrella 393
hiaticola, Ægialitis 738
hiemalis, Junco 315
Hieraetus 515
Hierococcyx 473
himalayana, Certhia 194
himalayana, Loxia 340
himalayanus, Accentor 150
himalayanus, Cuculus 470
himalayanus, Fregilus 405
himalayensis, Dendrocopus 441
himalayensis, Gyps 499
himalayensis, Regulus 92
himalayensis, Tetraogallus 690
Himantopus 753
himantopus, Charadrius 753
hirtensis, Troglodytes 196
Hirundo 264
hirundo, Sterna 808, 809
hispaniolensis, Gyps 499
hispaniolensis, Passer 291
histrionica, Cosmonetta 624
hodgsoni, Certhia 193
hodgsoni, Motacilla 199
hodgsoni, Ruticilla 51
hodgsoni, Turdus 2
hodgsoniæ, Perdix 684
Hodgsonius 59
holboelli, Falco 540
holboelli, Linota 316
holboelli, Podicipes 878
homeyeri, Lanius 230
homeyeri, Lusciniola 126
homeyeri, Sitta 189
Hoplopterus 745
hornemanni, Linota 317
horreorum, Hirundo 266
hortensis, Sylvia 78
hortulana, Emberiza 356
hortulanus, Serinus 280
hortulorum, Turdus 12
Houbara 726
houbara, Otis 726
hudsonica, Pica 417
humei, Sturnus 399
humii, Coccothraustes 287
humii, Pyrrhospiza 318
humilis, Podoces 409
humilis, Turtur 651
hutchinsi, Branta 595
huttoni, Accentor 152
huttoni, Argya 145
huttoni, Emberiza 357

PAGE
hyacinthinus, Porphyrio 712
hybrida, Hydrochelidon 807
Hydrochelidon 805
hyemalis, Anas 625
hyemalis, Gallinago 763
hyperboreus, Chen 597
hyperboreus, Lagopus 695
hyperboreus, Phalaropus 754
hyperboreus, Plectrophanes 375
hypermelæna, Parus 171
hyperythrus, Hierococcyx 474
Hypocolius 250
Hypolais 107
hypolais, Sylvia 107
hypoleucus, Totanus 791
Hypsipetes 225
hyrcanus, Erithacus 64
hyrcanus, Garrulus 412

ianthina, Columba 646
Ibidorhynchus 805
Ibis 584
ibis, Ardea 569
ichthyaetus, Larus 827
icterica, Emberiza 347
icterina, Hypolais 107
icteroides, Pycnorhamphus 289
ictinus, Milvus 534
ignavus, Bubo 489
ignicapillus, Regulus 93
ijimæ, Acanthopneuste 106
ijimæ, Phasianus 668
iliacus, Turdus 6
iliceti, Garrulus 413
immaculatus, Dendrocopus 445
immaculatus, Glaucidium 494
immer, Colymbus 876
immutabilis, Cygnus 598, 599
impennis, Alca 862
imperialis, Aquila 521
impeyanus, Lophophorus 673
incanus, Totanus 793, 794
incarnatus, Bucanetes 331
incii, Terpsiphone 262
indica, Lusciniola 125
indica, Pratincola 46
indica, Ruticilla 50
indica, Strix 498
indicus, Anser 593
indicus, Butastur 513
indicus, Coracias 463
indicus, Limonodromus 209
indicus, Lobivanellus 747
indicus, Oriolus 228
indicus, Passer 290
indicus, Rallus 705
indicus, Sturnus 399

PAGE
infaustus, Perisoerus 410
infuscatus, Lanius 244
innominata, Ninox 495
inornata, Ægialitis 734
inornatus, Lobivanellus 748
inquieta, Scotocerca 142
insignis, Phasianus 660
insignis, Pratincola 45
insularis, Acrocephalus 135
insularis, Dendrocopus 448
insularis, Strix 498
intermedia, Ardea 567
intermedia, Columba 640
intermedia, Lusciniola 130
intermedia, Phylloscopus 102
intermedius, Cuculus 470
intermedius, Pycnonotus 225
intermedius, Rallus 707
interpres, Strepsilas 750
irbii, Acredula 159
isabellina, Ceblepyris 250
isabellina, Galerita 391
isabellina, Otomela 239
isabellina, Saxicola 41
isabellinus, Caprimulgus 435
isabellinus, Corydus 392
isabellinus, Cursorius 730
isabellinus, Lanius 238, 240
isabellinus, Turtur 647
islandica, Clangula 622
islandica, Tringa 775
islandicus, Falco 540
islandicus, Larus 838
islandorum, Lagopus 694
islandus, Falco 540, 541
ispida, Alcedo 458
italiæ, Passer 290
Ithagenes 675
Iyngipicus 450
Iynx 457

JANKOWSKII, Emberiza 365
japonensis, Corvus 423
japonensis, Grus 719
japonica, Alauda 387
japonica, Ampelis 250
japonica, Certhia 193
japonica, Coturnix 686
japonica, Hirundo 268
japonica, Loxia 340
japonica, Motacilla 198
japonica, Ninox 495
japonica, Pica 417
japonica, Scops 488
japonica, Zosterops 221
japonicus, Anthus 215
aponicus, Buteo 509

PAGE
japonicus, Coccothraustes 287
japonicus, Dendrocopus 440
japonicus, Falco 552
japonicus, Garrulus 415
japonicus, Nucifraga 410
japonicus, Rallus 705
japonicus, Regulus 92
javanica, Ardetta 575
javanica, Strix 498
javanicus, Pelecanus 563
javanicus, Phalacrocorax 561
jerdoni, Accentor 151
jerdoni, Anthus 220
jerdoni, Sylvia 86
jessoensis, Gecinus 456

KALEENSIS, Iyngipicus 450
kamchatkensis, Nucifraga 410
kamtschatica, Pyrrhula 335
kamtschaticus, Corvus 424
kamtschaticus, Tetrao 697
kamtschatkensis, Dendrocopus 445
kancarowii, Phasianus 660
karelini, Gecinus 453
karelini, Otomela 240
kaufmanni, Falcirostra 805
kawarahiba, Ligurinus 285
kennicotti, Phylloscopus 99
keptuschka, Chettusia 745
kessleri, Turdus 11
khan, Dendrocopus 444
kingi, Saxicola 43
kittlitzi, Brachyrhamphus 868
kittlitzi, Charadrius 742
kittlitzii, Gavia 827
kizuki, Iyngipicus 451
kleinschmidti, Galerita 391
kodiaka, Pinicola 339
koenigi, Micropus 430
kollyi, Calandrella 393
komadori, Erithacus 64
komarovi, Phasianus 660
korschun, Milvus 535
koslovi, Accentor 155
krueperi, Sitta 189
krynickii, Garrulus 414
kuhli, Puffinus 852
kundoo, Oriolus 227
kurilensis, Troglodytes 884

LAGOPUS, Chelidon 270
lætior, Eurystomus 464
lagopoda, Chelidon 270
Lagopus 692
lagopus, Archibuteo 514
lagopus, Tetrao 692, 693

PAGE
lahtora, Lanius 232, 233
lanarius, Falco 543, 546
lanceolata, Locustella 132
languida, Hypolais 111
Lanius 228
lapponica, Limosa 797
lapponica, Strix 479
lapponicus, Calcarius 373
Larus 824
larvata, Otocorys 381
Larvivora 70
latirostris, Alseonax 252
laurivora, Columba 643
leachi, Thalassodroma 844
ledoucii, Parus 166
leiopus, Alauda 387
lentiginosus, Botaurus 579
lepida, Prinia 142
lepidus, Uragus 333
leptonyx, Corvus 425
Leptopœcile 90
leptorhynchus, Dendrocopus 439
lesbia, Emberiza 360
leschenaulti, Charadrius 735
leucauchen, Grus 722
leucocephala, Emberiza 359
leucocephala, Erismatura 634
leucocephala, Motacilla 209
leucocephalus, Buteo 511
leucocephalus, Chimarrhornis 60
leucocephalus, Haliaetus 525
leucocephalus, Pandion 554
leucocyana, Cyanecula 61
leucogaster, Cinclus 27
leucogenys, Dicrurus 228
leucogenys, Pycnonotus 224
leucogeranus, Grus 723
leucolena, Aquila 522
leucomela, Saxicola 31, 34
leucomelas, Puffinus 852
leuconota, Columba 641
leuconotus, Dendrocopus 447
leucopareia, Branta 595
leucopareia, Hydrochelidon 807
leucophæa, Calandrella 396
leucophæus, Corvus 423
leucophæus, Larus 833
leucophthalma, Æthyia 620
leucophrys, Xanthopygia 260
leucopis, Sitta 191
leucopogon, Sylvia 81
leucopsis, Branta 596
leucopsis, Motacilla 198
leucoptera, Ardea 572
leucoptera, Hydrochelidon 806
leucoptera, Loxia 342
leucoptera, Melanocorypha 385
leucoptera, Œstrelata 856

PAGE
leucoptera, Pica 417
leucopterus, Dendrocopus 439
leucopterus, Lanius 230
leucopterus, Larus 838
leucopyga, Saxicola 34
leucorodia, Platalea 582
leucorrhoa, Oceanodroma 844
leucoryphus, Haliaetus 523
Leucosticte 303
leucotis, Pycnonotus 224
leucura, Chettusia 746
leucura, Muscicapa 257
leucura, Saxicola 35
leucuroides, Saxicola 36
leucurum, Crossoptilum 671
leucurus, Buteo 512
levaillantii, Corvus 422
l'huysi, Lophophorus 674
lidthi, Garrulus 415
Ligurinus 283
lilacina, Halcyon 460
lilfordi, Dendrocopus 448
lilfordi, Grus 718
Limicola 764
Limonodromus 209
Limosa 797
limosa, Limosa 798
linaria, Linota 316
lineatus, Numenius 803
Linota 312
lithofalco, Falco 547
liturata, Strix 477
livia, Columba 639
lobatus, Phalaropus 754, 755
Lobivanellus 747
Locustella 131
locustella, Locustella 131
lomvia, Alca 863
lomvia, Uria 862
longicauda, Bartramia 782
longicaudus, Stercorarius 842
longicaudus, Uragus 332
longipennis, Sterna 810
longipes, Falcirostra 805
longirostris, Œstrelata 856
longirostris, Otocorys 379
longirostris, Parus 168
longirostris, Pyrrhospiza 318
Lophobasileus 91
Lophophanes 180
Lophophorus 673
lorenzi, Falco 542
lorenzi, Phylloscopus 98
Loxia 339
luciani, Picus 442
lucida, Ardea 569
lucionensis, Lanius 242
luctuosa, Muscicapa 254

PAGE
lugens, Motacilla 198
lugens, Saxicola 31, 885
lugubris, Acanthopneuste 100
lugubris, Ceryle 460
lugubris, Motacilla 197
lugubris, Ninox 495
lugubris, Parus 171
lugubris, Phylloscopus 103
lumme, Colymbus 874
Lunda 872
luscinia, Daulias 71, 72, 73
luscinia, Homochlamys 138
luscinioides, Locustella 136
Lusciniola 124
lusitanica, Certhilauda 377
lusitanicus, Chersophilus 377
luteiventris, Lusciniola 130
luteola, Emberiza 347
luteola, Muscicapa 257
luzoniensis, Motacilla 198

MAACKII, Acrocephalus 121
macedonica, Acredula 160
macei, Haliaetus 523
Machetes 780
macqueeni, Houbara 727
macronyx, Ægithalus 184
Macrorhamphus 795
macrorhyncha, Galerita 391
macrorhyncha, Pratincola 44
macrorhynchus, Corvus 422
macrorhynchus, Nucifraga 410
macrotarsa, Sterna 815
macrourus, Circus 506
macrura, Acredula 158
macrura, Sterna 808
macrurus, Parus 169
macrurus, Thalassaetus 527
macularius, Totanus 792
maculata, Aquila 517, 518
maculata, Tringa 766
maculatus, Anthus 212
maculatus, Turnix 704
madagascariensis, Porphyrio 713
madaraspatensis, Motacilla 199
maderensis, Fringilla 308
maderensis, Regulus 94
magna, Caccabis 678
magna, Galerita 391
magnirostris, Acrocephalus 116
magnirostris, Lanius 243
magnirostris, Phylloscopus 103
mahrattensis, Caprimulgus 436
major, Carduelis 274
major, Dendrocopus 438
major, Gallinago 758
major, Lanius 229, 231
major, Lusciniola 129

PAGE
major, Milvus 536
major, Parus 161
major, Platalea 582
major, Puffinus 851, 852
major, Pyrrhula 334
major, Rhopophilus 146
majoroides, Dendrocopus 442
malayanus, Scops 487
mandarina, Porzana 710
mandarinus, Picus 442
mandellii, Montifringilla 299
mandti, Uria 865
manillensis, Monticola 23
mansuetus, Cygnus 598
mantchuricum, Crossoptilum 672
Mareca 614
margaritæ, Certhilauda 376
marila, Æthyia 618
mariloides, Æthyia 619
marina, Pelagodroma 849
marinus, Larus 836
maritima, Tringa 776
Marmaronetta 607
marmorata, Alca 867
martius, Picus 437
maruetta, Porzana 706
maura, Pratincola 46
mauritanica, Cotile 885
mauritanica, Pica 418
mauritanus, Dendrocopus 441
maxima, Melanocorypha 383
maxima, Merula 17
maxima, Sterna 814
maximus, Bubo 489
media, Sterna 811
medius, Dendrocopus 449
meena, Turtur 648
megala, Gallinago 762
melanaetos, Aquila 522
melanocephala, Ardea 566
melanocephala, Emberiza 346
melanocephala, Ibis 584
melanocephala, Motacilla 207
melanocephala, Sylvia 82, 83
melanocephalus, Garrulus 413
melanocephalus, Larus 825
melanocephalus, Pluvianus 744
Melanocorypha 382
melanogaster, Cinclus 24
melanoleuca, Saxicola 37
melanoleucus, Circus 508
melanolophalus, Lophophanes 182
melanolophus, Gorsachius 574
melanope, Motacilla 202
melanophrys, Diomedea 860
melanopogon, Lusciniola 128
melanoptera, Glareola 730
melanopterus, Elanus 537

PAGE
melanopterus, Himantopus . . 753
melanorhinus, Cygnus . . . 600
melanothorax, Sylvia 87
melanotis, Milvus 536
melanura, Eophona 286
melanura, Limosa 799
melanuroides, Limosa 799
melanurus, Larus 832
melba, Cypselus 430
Melierax 533
Melizophilus 87
menetriesi, Buteo 511
menzbieri, Sturnus . . 399, 400
merganser, Mergus 635
Mergulus 864
Mergus 635
meridionalis, Athene 496
meridionalis, Lanius 234
meridionalis, Parus . . 167, 168
Merops 465
merula, Turdus 17
mesoleuca, Ruticilla 50
mexicana, Grus 720
meyeri, Limosa 797
meyeri, Pucrasia 671
michailowskii, Parus 166
michahellesii, Larus 833
microceros, Phaleris 870
micropterus, Cuculus 471
middendorffi, Anser 590
middendorffii, Phylloscopus . . 101
migrans, Milvus 535
miliaria, Emberiza 343
milvipes, Falco 544
Milvus 534
Milvus, Falco 534
minor, Ægialitis 740
minor, Botaurus 579
minor, Calandrella 394
minor, Cinclus 25
minor, Cygnus 600
minor, Dendrocopus 444
minor, Falco 545
minor, Fulmarus 858
minor, Garrulus 412
minor, Lanius 236
minor, Loxia 340
minor, Numenius 800
minor, Parus 162
minor, Pelecanus 563
minor, Phylloscopus 97
minor, Platalea 583
minor, Podicipes 881
minor, Sturnus 399
minuscula, Sylvia 77
minuta, Ardetta 575
minuta, Cettia 139
minuta, Porzana 708

PAGE
minuta, Sterna 815
minuta, Tringa 770
minutilla, Athene 494
minutilla, Tringa 772
minutus, Anser 592
minutus, Hieraetus 515
minutus, Larus 828
minutus, Numenius 800
miramaræ, Galerita 391
mitchellii, Iyngipicus 451
mitrata, Fulica 717
mlokosiewiczi, Tetrao 699
moabiticus, Passer 292
modesta, Ardea 568
modestus, Phylloscopus . 104, 105
modularis, Accentor 154
mœsta, Saxicola 40, 42
mogilnik, Aquila . . . 519, 521
moquini, Hæmotopus 752
mollis, Lanius 231, 232
mollis, Œstrelata 855
mollissima, Somateria . . . 631
moltchanovi, Parus 885
momus, Sylvia 82
monacha, Saxicola 32
monachus, Grus 720
monachus, Vultur 500
monedula, Corvus 419
mongola, Ægialitis. 734
Mongolica, Ægialitis 735
mongolica, Melanocorypha . . 385
mongolicus, Bucanetes . . . 331
mongolicus, Phasianus . 665, 666
monocerata, Cerorhyncha . . 871
monorhis, Oceanodroma . . . 847
montagui, Circus 505
montana, Certhia 193
montana, Saxicola 40
montanellus, Accentor . . . 153
montanus, Parus 169
montanus, Passer 293
montanus, Phylloscopus . . . 96
Monticola 21
Montifringilla 297
montifringilla, Fringilla . . . 310
montignesia, Grus 719
montium, Fringilla 313
moreleti, Fringilla 308
morinellus, Eudromias . . . 743
morio, Saxicola 32
Motacilla 197
moussieri, Pratincola 48
mugimaki, Muscicapa 257
multimaculata, Nucifraga . . 410
multistriatus, Accentor . . . 151
muraria, Tichodroma 194
murarius, Cypselus 427
murina, Pyrrhula 337

PAGE
murinus, Cypselus 428
murinus, Parus 169
murrayi, Propasser 302
Muscicapa 253
musicus, Cygnus 599
musicus, Turdus 2
mutus, Lagopus 693
Myiophoneus 883
mystacea, Sylvia 80, 82

NÆVIA, Aquila 517
nævia, Locustella 131
nævioides, Aquila 520
namiyei, Dendrocopus 448
nana, Sylvia 79
nanus, Turdus 5
narcissina, Xanthopygia 259
nattereri, Sylvia 96
naumanni, Falco 553
naumanni, Turdus 9
nearctica, Æthyia 618
nebularius, Totanus 786
neglectus, Anthus 215
neglectus, Corvus 420
neglectus, Phylloscopus 98
nemoricola, Fringalauda 302
Nemura 69
Neophron 501
nepalensis, Procarduelis 276
nepalensis, Spizaetus 528
Nettion 611
neumayeri, Sitta 191
newtoni, Phylloscopus 105
nigellii, Tetraogallus 690
niger, Hæmatopus 752
niger, Milvus 535
nigra, Ciconia 581
nigra, Hydrochelidon 805
nigra, Œdemia 627
nigricans, Branta 595
nigricans, Buteo 512
nigricollis, Grus 718
nigricollis, Podicipes 881
nigrifrons, Otocorys 379
nigripes, Ardea 569
nigripes, Diomedea 859
nigrogularis, Ruticilla 56
nilotica, Sterna 815
Ninox 495
nipalensis, Aquila 519
nipalensis, Procarduelis 276
nipalensis, Pyrrhula 338
nipalensis, Ruticilla 50
nippon, Ibis 585
nisicolor, Hierococcyx 474
nisoria, Surnia 431
nisoria, Sylvia 73
nisus, Accipiter 531

PAGE
nitens, Sturnus 399
nitidus, Phylloscopus 101
nivalis, Montifringilla 297
nivalis, Plectrophanes 374
nivea, Rissa 823
nivea, Strix 480
niveus, Larus 829
nivicola, Gyps 499
nivicola, Strix 478
nobilior, Sturnus 400
nordmanni, Glareola 730
novæ-zealandiæ, Limosa 798
noveboracensis, Macrorhamphus 795
noveboracensis, Porzana 709
nubicus, Lanius 247
Nucifraga 409
nudipes, Athene 496
Numenius 800
numidicus, Dendrocopus 440
numidicus, Malurus 144
nuttalli, Pica 418
Nyctala 482
Nyctea 480
nyctea, Strix 480
Nycticorax 573
nyroca, Æthyia 620

OBSCURA, Leptopoecile 91
obscurus, Anthus 216
obscurus, Puffinus 854
obscurus, Pycnonotus 222
obscurus, Tetraophasis 686
obscurus, Turdus 13
obsoleta, Cotile 273
obsoleta, Hypolais 112
obsoletus, Bucanetes 330
obsoletus, Scops 488
obtectus, Parus 173
occidentalis, Certhia 194
occidentalis, Larus 834
occidentalis, Tringa 778
occipitalis, Phylloscopus 106
oceanicus, Oceanites 848
Oceanites 848
Oceanodroma 844
ochotensis, Locustella 134
ochropus, Totanus 789
ochrura, Ruticilla 55
ocularis, Accentor 153
ocularis, Motacilla 202
Œdemia 626
Œdicnemus 727
œdicnemus, Charadrius 727
œnanthe, Saxicola 29
œnas, Columba 642
Œstrelata 855
olivetorum, Hypolais 109
olor, Cygnus 598

PAGE
olympicus, Cinclus 885
ombriosus, Parus 179
onocrotalus, Pelecanus . . . 562
opaca, Hypolais 110
opistholeuca, Saxicola 36
orientalis, Accentor 154
orientalis, Acrocephalus . . . 120
orientalis, Alauda 387
orientalis, Aquila 519
orientalis, Carduelis 275
orientalis, Eurystomus . . . 464
orientalis, Glareola 729
orientalis, Lanius 239
orientalis, Pernis 538
orientalis, Pyrrhula . . 335, 336
orientalis, Spizaetus 528
orientalis, Turtur 648
Oriolus 226
orphea, Sylvia 85
osculans, Hæmatopus 751
ostralegus, Hæmatopus . . . 751
Otis 723
Otocorys 378
otus, Asio 483
ouratensis, Passer 301
owstoni, Parus 175
oxianus, Phasianus 662

PACIFICA, Tringa 770
pacificus, Cypselus 430
pacificus, Fulmarus 858
pagodarum, Temenuchus . . 404
Pagophila 821
pallasi, Cinclus 28
pallasi, Turdus 4
pallens, Accipiter 531
pallens, Turdus 13
pallescens, Caccabis 678
pallescens, Troglodytes . . . 884
pallida, Hypolais 110
pallida, Pyrrhula 337
pallida, Saxicola 32
pallidus, Accentor 155
pallidus, Caccabis 678
pallidus, Circus 506
pallidus, Cypselus 428
pallidus, Troglodytes 196
pallidus, Turdus 13, 15
palmæ, Fringilla 309
palmensis, Parus 179
palumbarius, Astur 529
palumbus, Columba 645
palustris, Acrocephalus . . . 118
palustris, Parus 167, 168
palustris, Pyrrhulorhyncha . . 371
panaya, Sterna 818
panderi, Podoces 406
Pandion 554

PAGE
Panurus 156
paradisea, Sterna . . . 808, 810
paradisi, Terpsiphone 260
paradoxa, Motacilla 207
paradoxus, Syrrhaptes . . . 657
parasiticus, Milvus 537
parasiticus, Stercorarius . . 841, 842
Parus 161
parva, Muscicapa 256
parva, Porzana 708
parvexi, Otocorys 380
parvirostris, Tetrao 697
parvulus, Troglodytes . . . 195
Passer 289
passerina, Emberiza 371
passerina, Sylvia 80
passerinum, Glaucidium . . . 493
pastinator, Corvus 427
Pastor 401
paykulli, Porzana 710
pectoralis, Ægithalus 184
pectoralis, Calliope . . . 66, 67
pectoralis, Tringa 766
pecuaria, Ægialitis 742
peguensis, Alauda 389
pekinensis, Cypselus 428
pekinensis, Falco 553
pekinensis, Parus 164
pekinensis, Rhopophilus . . . 145
pelagica, Procellaria 843
pelagicus, Haliaetus 526
pelagicus, Phalacrocorax . . . 558
Pelagodroma 849
Pelecanus 562
pelios, Turdus 12
pendulinus, Ægithalus . . . 183
penelope, Mareca 614
penicillata, Otocorys . . . 379, 381
pennatus, Hieraetus 515
pennatus, Scops 487
pennsylvanicus, Anthus . . . 215
percnopterus, Neophron . . . 501
Perdix 682
perdix, Brachyrhamphus . . . 867
perdix, Tetrao 682
peregrinoides, Falco 546
peregrinus, Falco 544
Pericrocotus 263
Perisoreus 410
perlata, Strix 498
Pernis 538
pernyi, Dendrocopus 443
perpallidus, Gecinus 457
persica, Athene 496
persica, Calandrella 395
persica, Motacilla 201, 202
persica, Saxicola 31
persicus, Merops 466

PAGE
persicus, Parus 178
persicus, Phasianus 661
personata, Emberiza 350
personata, Eophona 285
personata, Motacilla 201, 885
personatus, Lanius 247
perspicillata, Œdemia 629
perspicillatus, Phalacrocorax 557
petrificatus, Ereunetes 778
Petronia 295
petronia, Fringilla 295
petrophila, Otocorys 380
petrosa, Caccabis 679
phæonotus, Parus 166, 885
phæopus, Numenius 801
Phalacrocorax 555
Phalaropus 754
Phasianus 658
philadelphia, Larus 826
philomela, Daulias 72
philothamna, Saxicola 42
phœnicoptera, Ampelis 250
phœnicoptera, Erythrospiza 328
Phœnicopterus 587
phœnicura, Ammomanes 398
phœnicuroides, Ammomanes 397
phœnicuroides, Hodgsonius 59
phœnicuroides, Lanius 240
phœnicuroides, Otomela 240
phœnicuroides, Ruticilla 50
phœnicurus, Lanius 240
phœnicurus, Ruticilla 48
phragmitis, Acrocephalus 123
Phylloscopus 94
Pica 417
pica, Corvus 417
picata, Saxicola 33
piceæ, Parus 166
Picoides 452
pictus, Chen 598
pictus, Chrysolophus 668
Picus 437
pilaris, Turdus 8
pileatus, Halcyon 462
pinctatissima, Strix 498
Pinicola 338
pipra, Dendrocopus 445
piscator, Sula 562
pispoletta, Calandrella 395
pithyornis, Emberiza 359
pityopsittacus, Loxia 340
placens, Sternula 816
placida, Ægialitis 739
Platalea 582
platyrhyncha, Limicola 764, 765
platyrhynchus, Phalaropus 755
Plectrophanes 374
Plegadis 586

PAGE
pleschanka, Saxicola 32
pleskii, Parus 177
pleskii, Podoces 407
plumbeitarsus, Phylloscopus 102
plumipes, Athene 497
plumipes, Buteo 509
plumipes, Caprimulgus 432
plumipes, Scops 489
pluvialis, Charadrius 731
Pluvianus 744
Podicipes 877
Podoces 406
poecilorhyncha, Anas 605
poeltzami, Acredula 160
poelzami, Dendrocopus 439
poensis, Strix 498
polaris, Emberiza 371
poliocephalus, Cuculus 471
poliocephalus, Porphyrio 713
poliogyna, Loxia 340
pollicaris, Rissa 822
poltaratzskyi, Sturnus 400
polyglotta, Hypolais 108
polyzonus, Melierax 533
pomarina, Aquila 518
pomatorhinus, Stercorarius 840
pomeranus, Lanius 246
Porphyrio 712
porphyrio, Fulica 713
porphyronotus, Sturnus 400
Porzana 706
porzana, Rallus 706
prasinoscelis, Ardea 572
pratensis, Anthus 210
pratensis, Crex 711
Pratincola 43
pratincola, Glareola 728
pratincola, Strix 498
princeps, Terpsiphone 261
principalis, Muscipeta 261
principalis, Phasianus 660
Prinia 141
prjevalskii, Pratincola 46
prjevalskii, Sitta 191
prjevalskii, Suthora 186
prjewalskii, Lanius 230
prjewalskii, Sitta 191
prjewalskii, Suthora 186
Procarduelis 276
Procellaria 843
propinqua, Ibis 584
proregulus, Phylloscopus 105
provincialis, Sylvia 87
psittaculus, Simorhynchus 871
Pterocles 652
Pterorhinus 147
Pucrasia 670
puella, Acanthopneuste 106

PAGE
puffinus, Puffinus 849
pugnax, Machetes 780
pulcherrimus, Carpodacus . . 325
pulverulentus, Passer 302
pulverulentus, Totanus . . . 793
punicea, Pyrrhospiza 318
punicus, Falco 545
purpurascens, Sturnus . . . 400
purpurea, Ardea 565
purus, Dendrocopus 438
pusilla, Emberiza 363
pusilla, Porzana 708
pusilla, Tringa 778
pusillus, Ereunetes 778
pusillus, Serinus 282
pusillus, Simorhynchus . . . 870
Pycnonotus 222
Pycnorhamphus 288
pygargus, Circus 505
pygmæa, Limicola 764
pygmæa, Porzana 707, 708
pygmæus, Eurynorhynchus . . 780
pygmæus, Phalacrocorax . . . 560
pygmæus, Simorhynchus . . . 870
pylzowi, Urocynchramus . . . 372
pyrenaicus, Cinclus 25
pyrenaicus, Pterocles 654
Pyrrhocorax 405
pyrrhocorax, Corvus 406
pyrrhogenys, Sturnia 404
Pyrrhospiza 318
pyrrhothorax, Ægialitis . . . 735
Pyrrhula 333
pyrrhula, Loxia 334
pyrrhulina, Pyrrhulorhyncha . 371
pyrrhuloides, Emberiza . . 371, 372
pyrrhuloides, Pyrrhulorhyncha . 371
Pyrrhulorhyncha 371

QUADRIFASCIATUS, Dendrocopus 444
Querquedula 609
querquedula, Anas 609

RADDII, Lanius 244
raii, Motacilla 208
ralloides, Ardea 571
Rallus 704
rama, Hypolais 112
randonii, Galerita 391
rapax, Aquila 520
reboudia, Calandrella 394
Recurvirostra 752
refulgens, Lophophorus . . . 673
regalis, Milvus 534
regia, Sterna 814
Regulus 91
regulus, Ammomanes 398

PAGE
regulus, Falco 547
reichenowi, Galerita 391
religiosa, Ibis 584
resplendens, Phalacrocorax . . 558
Rhamphocorys 377
rhodochlamys, Carpodacus . . 323
rhodochrous, Carpodacus . . 326
rhodometopus, Propasser . . 323
rhodopeplus, Carpodacus . . 326
rhodoptera, Erythrospiza . . 328
Rhodostethia 821
Rhopophilus 145
Rhyacornis 58
richardi, Anthus 219
richardsi, Picus 437
richardsoni, Nyctala 482
richardsoni, Stercorarius . . . 841
ridibundus, Larus 824
ringvia, Uria 862
riocouri, Hirundo 266
riparia, Cotile 271
risorius, Turtur 649
Rissa 822
rissa, Larus 822
roborowskii, Leucosticte . . . 306
robusta, Pratincola . . . 46, 47
robustus, Phalacrocorax . . . 558
romanowi, Otomela 240
rosacea, Pyrrhula 335, 336
rosaceus, Anthus 215
rosea, Acredula 158
rosea, Rhodostethia 821
roseus, Carpodacus 324
roseus, Pastor 401
roseus, Pelecanus 563
roseus, Phœnicopterus . . . 587
rossii, Larus 821
rostrata, Linota 316
Rostratula 757
rothschildi, Melizophilus . . 83
rubecula, Erithacus . . . 63, 64
rubeculoides, Accentor . . . 151
rubescens, Locustella 133
rubescens, Procarduelis . . . 276
rubescens, Sylvia 80, 82
rubetra, Pratincola 43
rubicilla, Carpodacus 319
rubicilloides, Carpodacus . . 320
rubicola, Pratincola 45
rubidus, Accentor 155
rubra, Caccabis 679
rubricollis, Podicipes 878
rubrifasciata, Loxia 341
rubrirostris, Anser 588
rudis, Ceryle 459
rueppelli, Sylvia 86
rufa, Caccabis 679
rufa, Hirundo 266

PAGE
rufa, Limosa 797
rufa, Saxicola 36
rufa, Sylvia 74
rufescens, Linota 316
rufescens, Saxicola 37
rufescens, Sitta 191
rufescens, Tringites 782
ruficollis, Branta 596
ruficollis, Caprimulgus 433
ruficollis, Montifringilla 300
ruficollis, Tringa 771
ruficollis, Turdus 14
ruficolor, Galerita 391
rufigularis, Ruticilla 53
rufilata, Nemura 69
rufilatus, Accentor 150
rufina, Æthyia 616
rufinuchalis, Lophophanes 181
rufinus, Buteo 512
rufipectus, Parus 166
rufipennis, Scops 487
rufipes, Falco 550
rufiventris, Cinclus 26
rufiventris, Ruticilla 50
rufogularis, Anthus 213
rufonuchalis, Aquila 518
rufula, Hirundo 267
rufus, Circus 503
rufus, Lanius 246
rufus, Phylloscopus 97
rupestris, Anthus 216
rupestris, Columba 641
rupestris, Cotile 273
rupestris, Lagopus 694
rupestris, Petronia 295
rupicola, Sitta 191
rupicola, Turtur 648
rüppelli, Galerita 391
russata, Ardea 569
russatus, Passer 293
rustica, Emberiza 362
rustica, Hirundo 264
rustica, Pica 417
rusticolus, Falco 539, 540
rusticula, Scolopax 756
Ruticilla 48
ruticilla, Phœnicura 48
rutila, Emberiza 348
rutila, Tadorna 602
rutilans, Ægithalus 184
rutilans, Passer 293
rutilus, Lanius 246

SABINII, Gallinago 760
sabinii, Xema 820
sacer, Falco 543
sachalinensis, Tetrao 697

PAGE
sacra, Demiegretta 569
saharæ, Emberiza 345
saharæ, Scotocerca 143
sala, Alauda 389
salicaria, Sylvia 78, 113
salicarius, Parus 168
salicicola, Passer 291
saltatrix, Saxicola 41
sancti-johannis, Dendrocopus 449
sandwichensis, Asio 484
sanguinea, Erythrospiza 328
sanguinolentus, Uragus 333
sardus, Melizophilus 89
satchuensis, Phasianus 667
satelles, Regulus 92
saturatior, Halcyon 461
saturatus, Cinclus 27
saturatus, Cuculus 470
saturatus, Propasser 326
saundersi, Gecinus 453
saundersi, Larus 827
savignii, Asio 492
savignii, Hirundo 266
savignyi, Merops 466
saxatilis, Caccabis 677
saxatilis, Monticola 21
Saxicola 29
scandiaca, Nyctea 480
scandulacea, Certhia 193
schimperi, Columba 640
schimperi, Larus 827
schisticeps, Ruticilla 56
schistisagus, Larus 836
schœniclus, Emberiza 370
schœnobænus, Acrocephalus 123
schwarzi, Lusciniola 127
scintillans, Phasianus 667
scintilliceps, Iyngipicus 450
scita, Sylvia 113
scolopaceus, Macrorhamphus 795
scolopacina, Gallinago 760
Scolopax 756
scolopax, Œdicnemus 727
Scops 486
scops, Scops 486
scoticus, Lagopus 693, 699
Scotocerca 142
scriba, Otocorys 381
scullii, Hirundo 267
scutulata, Ninox 495
seebohmi, Alaudula 396
seebohmi, Anthus 217
seebohmi, Iyngipicus 451
seebohmi, Lanius 231
seebohmi, Parus 168
seebohmi, Saxicola 30
segetum, Anser 589
semenovi, Scops 886

PAGE
semenovi, Saxicola 885
semipalmata, Ægialitis 740
semipalmata, Ereunetes 778
semipalmatus, Macrorhamphus 796
semirufa, Ruticilla 51
semitorquata, Muscicapa 256
semitorquatus, Phasianus 665
semitorques, Scops 489
senegalensis, Galerida 391
senegalensis, Perdix 682
senegalensis, Turtur 650
senegallus, Pterocles 655
senex, Acredula 160
septentrionalis, Colymbus 874
septentrionalis, Phasianus 658
Serinus 280
serinus, Fringilla 280
serrator, Mergus 636
setarius, Pterocles 654
setipes, Glaucidium 493
severtzovi, Carpodacus 319
severtzovi, Passer 292
severtzovi, Tetrastes 701
severus, Falco 549
sharpii, Corvus 422
sharpii, Gecinus 454
sharpii, Turtur 647
shawi, Phasianus 660
sibericus, Panurus 157
sibilatrix, Phylloscopus 95
sibirica, Hemichelidon 251
sibirica, Limicola 765
sibirica, Melanocorypha 385
sibirica, Otocorys 379
sibiricus, Bubo 490
sibiricus, Corvus 424
sibiricus, Lanius 231
sibiricus, Parus 172
sibiricus, Perisoreus 411
sibiricus, Turdus 19
sibiricus, Uragus 332
sicula, Acredula 160
sieboldi, Sphenocercus 639
sifanica, Perdix 11, 684
similis, Anthus 220
Simorhynchus 869
simplex, Passer 294
sinaiticus, Carpodacus 322
sindianus, Dendrocopus 443
sindianus, Phylloscopus 99
sinensis, Ardetta 576
sinensis, Corvus 423
sinensis, Cotile 272
sinensis, Garrulus 415
sinensis, Ibis 585
sinensis, Ithagenes 675
sinensis, Phalacrocorax 555
sinensis, Sitta 188

PAGE
sinensis, Sterna 816
sinensis, Urocissa 417
sinicus, Ligurinus 284
Sitta 186
skorniakovi, Anser 593
skua, Cataracta 839
smaragnotus, Porphyrio 713
smithii, Caprimulgus 432
smithsonianus, Larus 832
smyrnensis, Halcyon 461
snowi, Uria 867
sœmmerringi, Phasianus 667
solitaria, Gallinago 763
solitaria, Merula 4
solitarius, Monticola 23
solitarius, Totanus 790
Somateria 630
songarus, Parus 170
sophia, Carpodacus 324
sophiæ, Leptopœcile 90
sordida, Fringalauda 302
sordidus, Anthus 220
sordidus, Cinclus 27, 28
sparveroides, Hierococcyx 473, 474
Spatula 606
spectabilis, Somateria 632
speculiger, Lanius 239
speculigerus, Coccothraustes 288
speculigerus, Lanius 230
Sphenocercus 639
sphenocercus, Lanius 230
sphenurus, Sphenocercus 639
spilonotus, Circus 504
spinoides, Chrysomitris 277
spinosus, Hoplopterus 745
spinus, Chrysomitris 276
spipoletta, Anthus 214
Spizaetus 528
spodiogaster, Ardetta 575
spodiogenys, Fringilla 309
Spodiopsar 402
spodocephala, Emberiza 350
sponsa, Aex 603
squamatus, Gecinus 455
squamiceps, Argya 144
squamiceps, Urosphena 140
Squatarola 733
squatarola, Charadrius 733
stagnatilis, Parus 168
stagnatilis, Totanus 787
stapazina, Saxicola 36, 37
stejnegeri, Œdemia 627
stellaris, Botaurus 578
stelleri, Somateria 630
stentoreus, Acrocephalus 120
stenura, Gallinago 761
Stercorarius 839
Sterna 808

	PAGE
stevensoni, Accipiter	532
stewarti, Emberiza	367
stictonotus, Scops	488
stoliczkæ, Ægithalus	183
stoliczkæ Carpodacus.	320
stoliczkæ, Passer	292
stolidus, Anous	819
stracheyi, Emberiza	368
straminea, Locustella	132
strauchi, Phasianus	663
strauchi, Scops	488
strenuus, Hierococcyx	473
strenuus, Sterna	813
streperus, Acrocephalus	117
streperus, Chaulelasmus	605
Strepsilas	750
striata, Tringa	776
straticeps, Drymoeca	143
striatus, Cuculus	471
striatus, Melizophilus	142
stricklandi, Loxia	340
stricklandi, Puffinus	851
stridens, Garrulus	413
stridula, Strix	476
striolata, Emberiza	344
striolata, Hirundo	268
striolatus, Anthus	220
Strix	476
strophiatus, Accentor	151
strophiatus, Archibuteo	515
struthersi, Ibidorhynchus	805
stulta, Petronia	295
sturmi, Ardetta	578
Sturnia	403
sturnina, Sturnia	403
Sturnus	399
subalpina, Lagopus	692
subalpina, Sylvia	81
subarquata, Tringa	774
subbuteo, Falco	548
subcerthiola, Locustella	134
subcirris, Dendrocopus	447
subfurcatus, Cypselus	429
subminuta, Tringa	772
subpalustris, Parus.	168
subpersonata, Motacilla	885
subruficollis, Tringites	782
subviridis, Phylloscopus	107
suecica, Cyanecula	61, 62
Sula	561
sulphurata, Emberiza	351
sulphurea, Motacilla	202
sunia, Scops	487
superbus, Erithacus	64
superciliosus, Lanius	241
superciliosus, Parus	173
superciliosus, Phylloscopus	104
superflua, Galerita	391

	PAGE
suratensis, Turtur	651
surinamensis, Hydrochelidon	806
Surnia	481
Suthora	185
swainsoni, Circus	506, 507
swainsoni, Turdus	4
sylvatica, Turnix	703
Sylvia	73
sylvicultrix, Phylloscopus	99
Synthliborhamphus	868
syriaca, Sitta.	191
syriacus, Dendrocopus	444
syriacus, Serinus	281
syrmatophorus, Ardea	568
Syrrhaptes	657
szechenii, Tetraophasis	687
TACHYDROMUS, Hemipodius	703
taczanowskia, Lusciniola	130
taczanowskii, Macrorhamphus	796
taczanowskii, Onychospiza	299
Tadorna	601
tadorna, Anas	601
tæniura, Certhia	194
tænioptera, Loxia	343
tahitiensis, Numenius	804
taivana, Motacilla	208
talas, Saxicola	32
talischensis, Phasianus	660
tarda, Otis	723
tarimensis, Phasianus	662
tarnovskii, Phasianus	661
tartarica, Melanocorypha	386
tchagra, Lanius	248
Telephonus	248
teleschowi, Otocorys	379
temmincki, Accentor	153
temminckii, Anser	592
temmincki, Brachyrhamphus	869
temmincki, Myiophoneus	883
temmincki, Tringa	773
tenebrosus, Puffinus	854
tenellipes, Phylloscopus	102
teneriffæ, Parus	178, 179
teneriffæ, Regulus	92
tengmalmi, Nyctala	482
tenuirostris, Larus	830
tenuirostris, Numenius	802
tenuirostris, Platalea	583
tenuirostris, Puffinus	853
tephronota, Acredula	160
tephronota, Sitta	191
tephronotus, Lanius	10, 245
terek, Scolopax	794
Terekia	794
Terpsiphone	260
tetraculus, Simorhynchus	869
Tetrao	695, 725

PAGE
Tetraogallus 688
Tetraophasis 686
Tetrastes 700
tetrax, Otis 725
tetrix, Tetrao 696, 698
teydea, Fringilla 310
theclæ, Galerita 391
thecklæ, Galerita 391
thibetana, Chrysomitris 278
thoracica, Lusciniola 128
thura, Carpodacus 327
tianschanicus, Parus 176
tibetana, Calandrella 393
tibetanum, Crossoptilum 671
tibetanus, Corvus 423
tibetanus, Syrrhaptes 658
tibetanus, Tetraogallus 690
Tichodroma 194
tigrinus, Lanius 243
timidus, Passer 292
timoriensis, Ardea 568
tingitanus, Corvus 425
tinnunculoides, Falco 553
tinnunculus, Falco 552
tintillon, Fringilla 307
titys, Ruticilla 54, 55, 56
torda, Alca 861
torquata, Branta 594
torquata, Clangula 624
torquata, Columba 645
torquata, Glareola 728
torquata, Melanocorypha 384
torquata, Puffinus 856
torquata, Turtur 649
torquatus, Colymbus 876
torquatus, Phasianus 665
torquatus, Turdus 19
torquilla, Iynx 457
torresii, Sterna 811
Totanus 783
townsendi, Plectrophanes 375
tranquebaricus, Turtur 651
triborhyncha, Alauda 387
tricolor, Xanthopygia 260
tridactyla, Rissa 822
tridactylus, Picoides 452
trifasciatus, Carpodacus 323
Tringa 766
Tringites 782
tristis, Acridotheres 404
tristis, Phylloscopus 98
tristrami, Emberiza 366
tristrami, Oceanodroma 846
trivialis, Anthus 211
trivirgata, Acredula 158
trocaz, Columba 644
Trochalopterum 147
trochilus, Phylloscopus 94

PAGE
Troglodytes 195
troglodytes, Anorthura 195
troile, Alca 862
tschebaievi, Calliope 66
tschegrava, Sterna 813
turcomanus, Bubo 490
Turdus 1
turdoides, Acrocephalus 119
turdoides, Philomela 72
Turnix 703
Turtur 646
turtur, Columba 646
tytleri, Hirundo 266

ULTRAMARINUS, Parus 178
ulula, Surnia 481
umbrinus, Corvus 424
uncinatus, Lanius 234
undatus, Melizophilus 87
undulata, Houbara 726
undulata, Porzana 709
unicolor, Cypselus 429
unicolor, Sturnus 401
unwini, Caprimulgus 432
upcheri, Hypolais 111
Upupa 467
Uragus 332
uralensis, Hierofalco 542
uralensis, Sitta 187
uralensis, Strix 477
uralensis, Tetrao 696
urbica, Chelidon 269
Uria 864
urile, Phalacrocorax 557
Urocynchramus 372
urogalloides, Tetrao 697
urogallus, Tetrao 695, 699
uropygialis, Limosa 798
uropygialis, Numenius 802
Urosphena 140
ussurianus, Cettia 140
ussurianus, Corvus 424
ussuriensis, Coturnix 686
ustulatus, Turdus 4

VAILLANTI, Gecinus 454
Vanellus 749
vanellus, Tringa 749
varia, Ægialitis 742
variabilis, Emberiza 361
variabilis, Tringa 769
variabilis, Turnix 704
variegatus, Numenius 802
varius, Parus 174
varius, Turdus 16
vegæ, Larus 834

PAGE
vereda, Ægialitis 736
verreauxi, Carpodacus 326
versicolor, Phasianus 664
vespertinus, Falco 550
veterum, Porphyrio 712, 713
villosa, Sitta 190
villotæi, Chettusia 746
vinacia, Acredula 161
vinaceus, Carpodacus 325
violacea, Sturnia 404
violaceus, Parus 179
vipio, Grus 722
virgatus, Accipiter 532
virginicus, Charadrius 732
virgo, Grus 721
viridanus, Phylloscopus 101
viridirostris, Grus 719
viridis, Gecinus 453
viridis, Merops 467
viridis, Motacilla 206
viridissimus, Merops 467
viscivorus, Turdus 1
vittata, Saxicola 30
vittatus, Cypselus 430
vittatus, Lanius 237
vlangali, Phasianus 664
v-nigrum, Somateria 632
vocifera, Ægialitis 741
vulgaris, Buteo 509
vulgaris, Clangula 621
vulgaris, Coccothraustes 287
vulgaris, Coturnix 685
vulgaris, Francolinus 681
vulgaris, Milvus 534
vulgaris, Otus 483
vulgaris, Pyrrhula 333
vulgaris, Sturnus 399
vulgaris, Turtur 647

PAGE
vulgaris, Vanellus 749
vulpanser, Tadorna 601
Vultur 500

WASHINGTONII, Haliaetus 525
wattersi, Alauda 389
webbiana, Suthora 185
whiteheadi, Sitta 190
whitei, Turdus 16
willkouskii, Strix 477
wilsoni, Oceanites 848
wolfi, Cyanecula 61, 63
wolterstorffi, Accipiter 886
wumizusume, Synthliborhamphus 869

XANTHODRYAS, Phylloscopus 100
xanthomelæna, Saxicola 37
xanthophrys, Motacilla 207
xanthoprymna, Saxicola 40
Xanthopygia 259
xanthopygus, Pycnonotus 223
xanthorhinus, Cygnus 599
xanthospila, Pucrasia 670
Xema 820

YARRELLI, Motacilla 197
yatii, Passer 291
yelkouanus, Puffinus 850
yeltoniensis, Melanocorypha 386
yessoensis, Emberiza 370

ZARAFSCHANICUS, Phasianus 661
zarudnoi, Gecinus 455
zarudnyi, Ammomanes 398
zimmermannæ, Buteo 510
zonorhyncha, Anas 605
zorca, Scops 486
zosterops 221

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